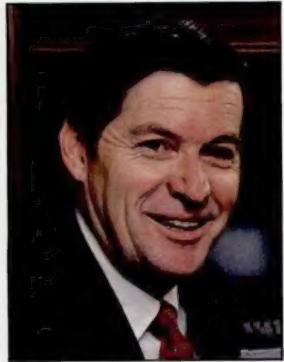


InfoWorld

THE PERSONAL COMPUTING WEEKLY



RON BROWN
PAGE 15

NEWS

OSBORNE IS BACK WITH THE VIXEN

THE INDUSTRY

CAN TELEX COMPETE WITH E-MAIL?

USING MICROS

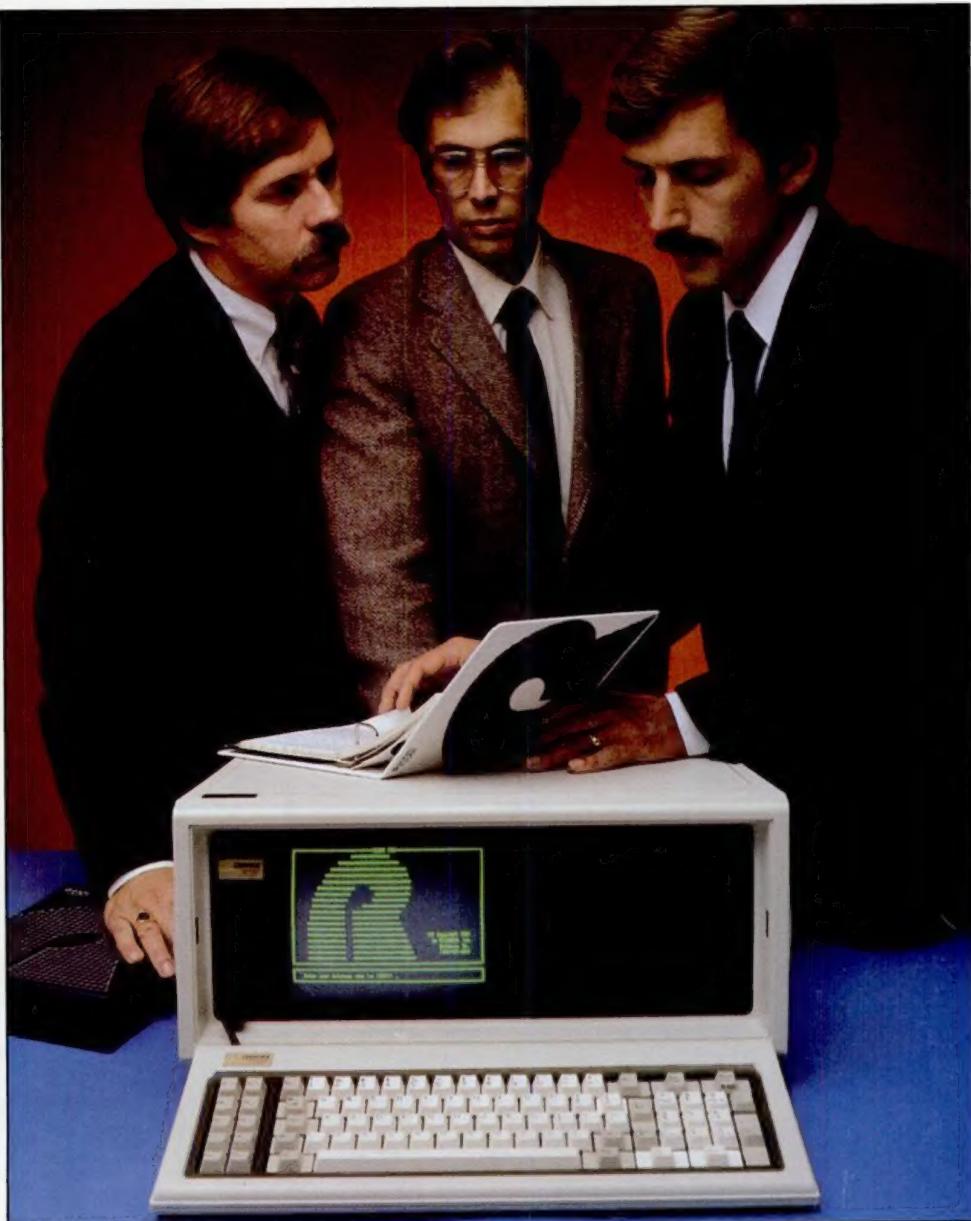
COMPUTING IN THE USSR

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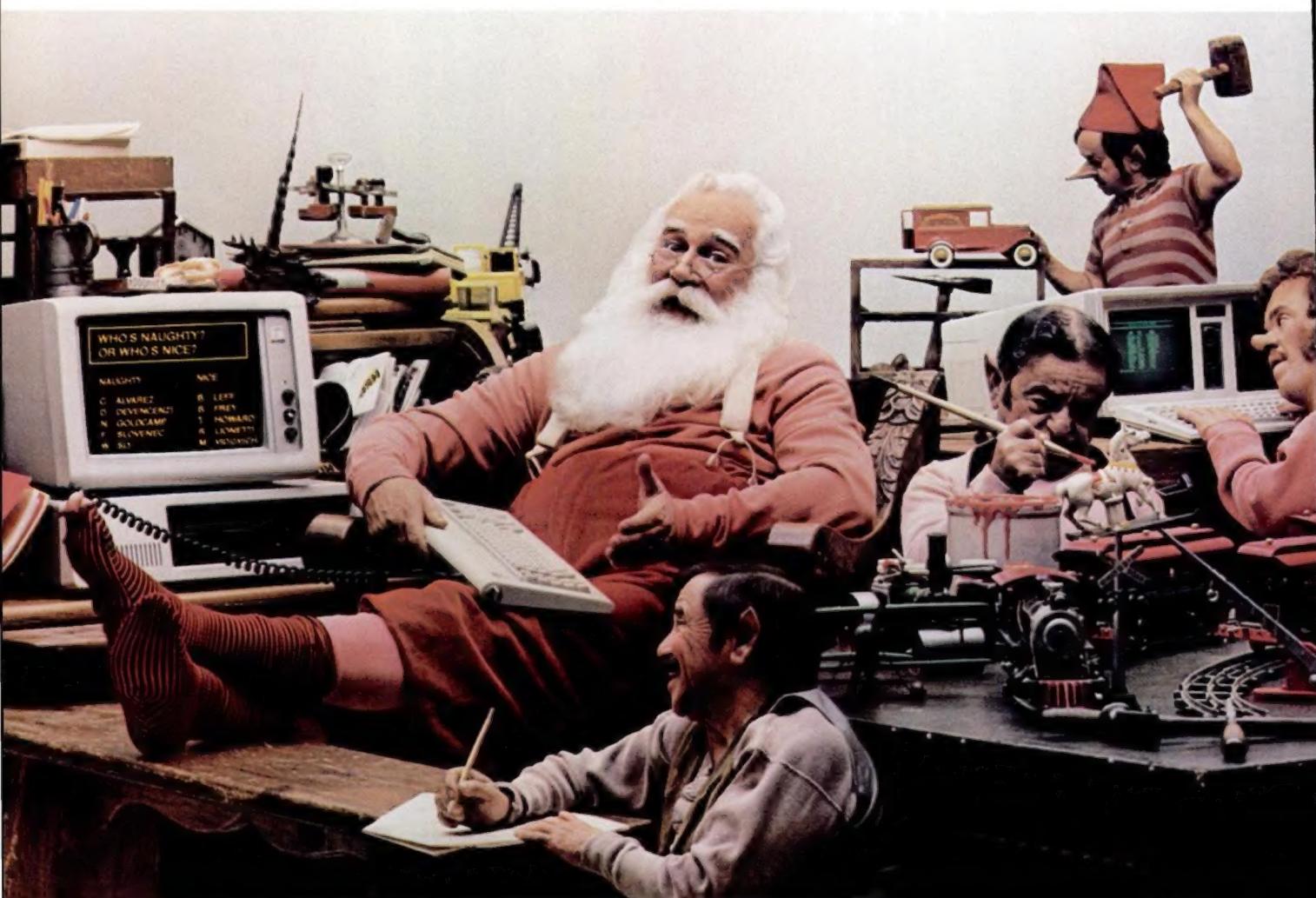
KAYPRO 2X: UTILITARIAN; SMART LOGO: A CONTENDER



CAN ANYONE SELL NATURAL LANGUAGE?



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InfoWorld

VOLUME 6, NUMBER 46

CW COMMUNICATIONS INC.

NOVEMBER 12, 1984

COVER STORY



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NEWS



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USING MICROS



27

Wayne J. Erickson, Geoffrey von Limbach, and Colin Miller of Microrim (cover) know that selling the idea of natural language for computers isn't easy. But they are confident their universal version of Clout can create consumer appetite for natural language.

Ron Brown, president of the revamped Osborne Computer Corp., is hoping the Vixen, an Osborne 1 compatible with bundled software, will revive the company. Osborne plans to reward its foul-weather friends by making the units available first to Osborne users groups.

In the USSR, the government is taking steps to permit more access to personal computers, including a 15-year plan to teach students the use of a Soviet-made computer. Still, some Soviet Union watchers see philosophical and technological problems ahead.

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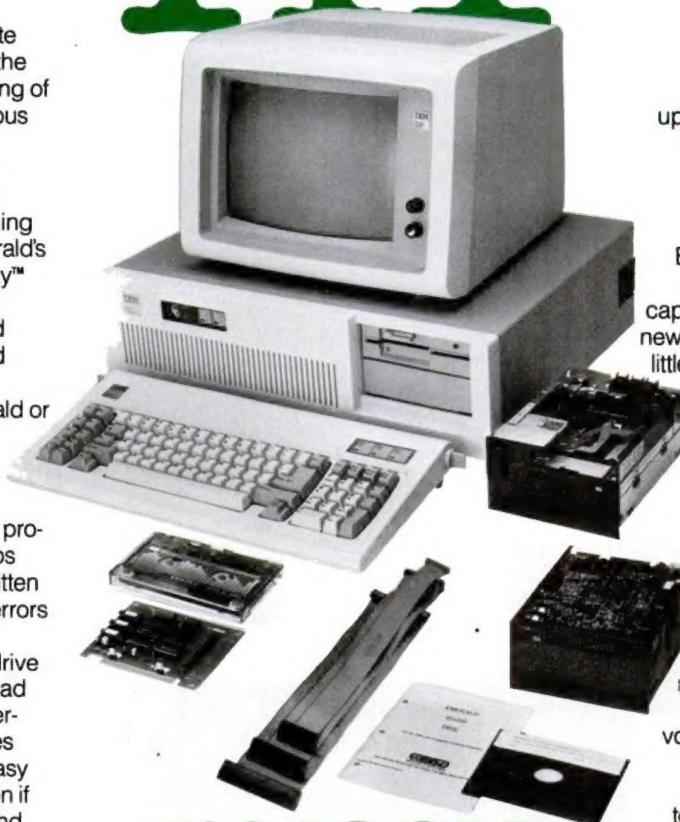
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NOT A SMALL PRICE

Loyd Case Jr. ("A small price," Viewpoint, October 22, 1984) must be kidding. To call breaking into data files at NASA, TRW, and similar institutions "youthful curiosity" is absurd. What these particular hackers did was out and out criminal. Perhaps if they accessed the database, looked around, and exited, then I would say it was curiosity. These curious youths, however, left cute messages and made some file changes. That's no longer innocent; it's malicious and deliberate.

I don't favor sending these kids to Devil's Island, but society must make an example of some types of behavior to discourage others from following a similar path.

Robert Peritz
Bronxville, NY

NOT THEIR FAULT

I don't think teenagers are getting out of control with their computers and modems. Companies such as NASA and TRW hire people to secure their computers against these things. A computer can't be totally secure, but such firms can make break-ins difficult. If a teenager does get in, I don't think it's all his fault.

It's not right to break into a company's computer, but a system shouldn't be totally vulnerable.

Jim Cottrell
Houghton, MI

SHAKEOUT PROBLEMS

While I have some sympathy for Rick Cook ("Cheers for shakeout," Viewpoint, September 24, 1984), he was lucky. His experience does not necessarily represent what has happened to many computer or television repair shop customers. He could have been told that he needed a new motherboard for \$800 or so. Many computer repair shops will not try to replace soldered-in components because the chance of losing the fragile printed circuits is great.

Computer repair is more complex than television repair, yet TV shops have a reputation for charging high prices because average repairs are so complex. How can we expect better from the more complex and untrained computer repair industry?

I recently returned a month-old floppy drive controller to the manufacturer for warranty repair. After a month the manufacturer returned it unrepaired. Many phone calls later, the customer service person admitted that he could not fix it and did not have a replacement because the firm was in the midst of licensing another manufacturer to make it.

I have since repaired the controller but probably could have bought five new ones if my time were charged at the going repair rates.

Robert Farmer
Boulder, CO

7,000 PROGRAMMERS?

I just came across a copy of *InfoWorld*, August 27, 1984, and was reminded of the laugh my colleagues and I had reading John C. Dvorak's column "IBM keeps on rolling." I've never read anything more absurd in my life!

I work at the Bailey Avenue facility that Dvorak claims is packed with 7,000 IBM programmers. Unless they are packed inside the return-air ducts or someplace, there's no way that many people work here!

R.A. Davis
San Jose, CA

MAC TOOLS

John Dvorak is absolutely on track in his October 15, 1984, column about third-party software support ("Formula for hardware success"). Unfortunately, it may be the downfall of the Macintosh. Although Apple has been courting third-party software vendors vigorously, the Mac is so complicated inside that writing a program for it is radically more difficult than doing so for an Apple II or IBM PC. The pros are having trouble doing it, even with Apple's help (witness the lateness of applications); the hobbyists haven't got a chance.

What we need are some good tools — decent resident language compilers would help, but they aren't enough to get a handle on the task. We need a good way to build windows with icons and menus connected to the application code so it works right. Hmm... I'm a toolmaker; maybe I should get busy.

Tom Pittman
San Jose, CA

DATABASE LIMITATIONS

It is nice to see that some people who seriously use commercial electronic sources of information are starting to realize that such services have their limitations (Tech Street, October 22, 1984). This should, however, be placed in the context of their advantages. Many in the information industry recognize databases for what they are: a new medium that handles some types of information better — and some worse — than other media, such as books and magazines.

It is the user who thinks computerized information is more accurate. It is the user who thinks searching databases can substi-



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LETTERS

tuted for other types of research. It is the user who thinks searching databases is so easy that training is unnecessary.

To John Gantz in particular, I say: Don't worry about "useless information in electronic form." It is too costly to maintain. In the last three months, 72 databases have been dropped (according to Cuadra Associates). The number of databases continues to grow (180 in the same period), but only those most appropriate to that medium will survive. Go to an expert if you want to know what this means. Information in any form is only as valuable as the person who knows how to use it.

*Maureen Corcoran, President
Online Connection Inc.
Gainesville, FL*

SCRIPSIT USERS FAITHFUL

I found one letter on "Radio Shack's image" in the October 1, 1984, issue most amusing. When I wrote Scripsit in 1979, it was never intended to compete against Wordstar, yet Scripsit users remain faithful despite numerous advances in the state of the art since then. I am flattered that this program, which was supposed to do Electric Pencil one better, should even be compared to a program as powerful as Wordstar. But I can compare as well as the letter writer can. Although the implementation of headings and footings is not one of Scripsit's strong points, does Wordstar allow multiple line headings and footings?

As far as "innovative products," which the letter writer seems to think Radio Shack lacks, my design for Model II Scripsit was the first word processor on the personal computer market to include user-defined function keys (which Wordstar still does without); my Superscripsit was the first to support true proportional spacing (about which Wordstar users still only dream); and Radio Shack was the first major computer manufacturer to support the 68000 microprocessor and offer a multiuser system.

To make a fair comparison, I suggest trying the version of Scripsit that I originally designed for Radio Shack's Model II. Or, for an even more powerful system, check out the Model 16 version (designed by Tandy's competent word processing programming team). As usual, utility is in the eye of the beholder, but I do not think Radio Shack is wanting in word processing.

*Samuel A. Solomon
San Francisco, CA*

DISK DRIVE

I enjoyed Rich Tennant's cartoon about the computerized house in your October 22, 1984, issue. It reminds me of my first

night with my new Rana drive for my Apple II. I was excited and showed everyone but my 2-year-old all the neat things it did. The next morning when I came back to the machine, I tried to insert a disk and couldn't. My 2-year-old came up and told me he enjoyed the new garage, into which he had driven two Matchbox cars.

*Alan Creutz
San Diego, CA*

INFOWORLD ON NEXIS

In your September 3, 1984, issue, you reported that *InfoWorld* is now on-line through Mead Data Central's Nexis service. You also say that Nexis is accessible through "special" terminals and the IBM PC only.

As you have previously reported elsewhere in your publication, however, Mead Data Central's information retrieval services are also available through the IBM 3270 PC, Portable PC, Displaywriter, and 3101 terminal; the AT&T Personal Computer; TeleVideo 950; the Wang Professional Computer; Apple III; and Xerox 820-11.

Software will be available imminently as well for the Apple Macintosh, Apple IIC Portable, and Apple IIe. Other micros are expected to gain access soon.

As public relations counsel to Mead Data Central, our firm wants your readers to know the many ways they can access Nexis, Lexis, and other Mead Data Central services.

*Andrea Axelrod
Jeffcoat Schoen & Morell Inc.
New York, NY*

CLARIFICATIONS

Our response to an October 8, 1984, letter to the editor ("Magazine shakeout") said it had not been determined how subscription obligations would be met for several magazines no longer published. Ted Leonsis, editor and publisher of *List*, says "we have offered all of our subscribers a prorata refund, the option to fulfill their subscriptions with the *List* business software directories, or the monthly magazine *Management Technology*."

"Ask Mr. Science," a radio program mentioned in the November 5, 1984, People column, is a feature of American Public Radio.

Please write to Letters, InfoWorld, 1060 Marsh Road, Suite C-200, Menlo Park, CA 94025 (CompuServe: 76703,617 or The Source: TCX939). Include your name, address, and daytime telephone number. Letters selected for publication will be edited for length and clarity.

JADED MEMORY

BY ARTHUR SALSBERG

Contributor

Judging from "Solomon's Memory," the *Digital Deli* book excerpt published in *InfoWorld*, October 15, 1984, Les Solomon's "memory" is jaded.

He gives the impression that he made MITS president, Ed Roberts, aware of Intel's 8008 central processor unit in 1974. In a recent interview in *Modern Electronics* magazine, Roberts stated that he looked at the chip in 1973 and concluded that it wasn't powerful enough. He started examining the newer 8080 in 1974.

Solomon notes that the MITS Altair computer was ready that summer (1974), around the time that the 8008 CPU-based computer project was published. It wasn't! In the aforementioned interview, Roberts advised that the Altair bus, which became the S-100/IEEE-696, was not designed until around October 1974. A prototype was not ready until very late fall, barely making the deadline for a January 1975 issue cover story on the Altair.

Solomon implies that he was the sole catalyst in bringing the Altair computer to publication in a major magazine, as well as playing a part in the computer's development. This is not true. The idea for seeking out a computer for hobbyists started when I read a manuscript submitted by Don Lancaster around January 1974. It described plans to build an ASCII keyboard and encoder for less than \$40. I wondered if the main part of a small computer could be made available at a similarly reduced cost. Discussing this with Solomon, I directed him to scout around to see if someone could develop this as a kit, while I would do the same.

We gathered computer proposals and articles, but none was satisfactory. Instead, I planned to publish a computer trainer proposed by a software consultant, Jerry Ogden, until the right one came along. Near the beginning of summer 1974, I think, *Radio-Electronics* featured a computer project that used an 8008 CPU. It took away our thunder, I felt.

I showed the article to Solomon, who was not at all aware of its existence (though he implies in the excerpt that he

knew about its preparation and alerted Roberts to it). I also showed him a major article about Intel's more powerful 8080 CPU and indicated that we should try to get a computer built around this chip.

We ticked off all the prospects we contacted and some that we should. "Isn't there anyone else?" I asked. Solomon then casually mentioned that Roberts was working on a computer, but that he was not near completing it. I quickly instructed Solomon to telephone Roberts and to dangle a cover story on the computer if he could make our deadline and if the computer was sufficiently powerful. I also told Solomon to tell Roberts that he must include an attractive cabinet with the kit because this would make it more appealing to readers.

Solomon returned to my office later and excitedly told me that Roberts said he could make the deadline. He barely did, making history with it.

The excerpt indicates that I said I would go along with him on publishing a construction article on a microcomputer, quoting me as saying, "Heaven only knows who will build one!" This is fiction. As the generator of the whole concept, I certainly did not require any persuasion to publish such an article. Furthermore, I would not have published a construction project that I thought few people would find attractive enough to build. Interestingly, I learned only recently that Solomon had expressed to Roberts the basic sentiment attributed to me, which terrified Roberts because he was taking this risk with the help of a large bank loan. So drawing on my Army psychological warfare experience, I'd call Solomon's quote transference.

On the naming of Altair for the computer, it is my understanding that it was suggested by John McVeigh, a staff editor, during a meeting with two other staff editors, Solomon and Al Burawa, the latter now managing editor of *Modern Electronics* magazine, who confirms this. Solomon weaves a nice story about his daughter's naming the machine while watching "Star Trek," but it seems that this is just a story.

It's regrettable that Solomon's self-aggrandizing is distorting the historical beginnings of the small-computer industry. He was a participant, of course, but his embellishments will lead later writers to misrepresent what really happened. □

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Arthur Salsberg is editor and associate publisher of *Modern Electronics*.

John Barry

ALTERED EGOS



The Second Self
By Sherry Turkle
Simon & Schuster, \$17.95

In *The Second Self: Computers and the Human Spirit*, Massachusetts Institute of Technology sociologist/psychologist Sherry Turkle implies that computers will become some sort of pandemic alter ego. People will be differentiated by their computer weltanschauung: Some will take a "hard" approach; others will favor a "soft" approach.

The "hards" want to be in control of their computing, while the "softs" prefer a more intuitive, impressionistic approach. Essentially, the former tend to view humans as being like computers. The latter think of computer operations as reflecting human thought processes.

After much beating around the cognitive copice, Turkle, on page 166, acknowledges that some individuals "see [computers] merely 'as a tool' and assimilate them into their nine-to-five lives."

Four pages earlier, Turkle proclaims: "Whether or not computer scientists ever create an artificial intelligence that can think like a person, computers change the way people think — especially about themselves."

That's a provocative pronouncement — one to which a reader should adhere to be an unabashed supporter of this book — but how valid is it?

Turkle contrasts computers with TV because, superficially, they resemble each other. Both provide information and images on a screen. The difference, however, is that TV necessitates nothing more than a vegetative state. Computers, on the other hand, require involvement. (This dichotomy sounds like Marshall McLuhan redux.)

A comparison of computers to TV is appropriate in a discussion of technologically altered states. With the possible

exception of successful network programming executives, most of us will have to conclude that, for the most part, TV — the network variety — has become a purveyor of passive pabulum. We can only hope that if Turkle's assertion about computers' influence on cognition proves to be universally demonstrable, computers won't take us down the benighted path on which TV has led us.

We are potentially less likely to view computers "merely as tools" because computers give the outward appearance of being able to replicate human thought processes, i.e., to think.

Turkle begins her exploration of this metaphysical thicket with thoughts of

**Turkle implies that
computers will
become some sort
of alter ego.**

"child philosophers," a concept of psychologist Jean Piaget, on whose work much of Turkle's book seems to hinge.

After nearly half a book's worth of kids' concepts of and reactions to computers, a reader more attuned to W.C. Fields than to data fields might be tempted to comment: "Children should be seen but not heard from so extensively in this book." But, as the author points out, exposure to computers has become a part of childhood; many children are more comfortable with computer use than their parents are.

Today's children will eventually become tomorrow's adults, and their early exposure to computers may well have a profound impact on the way they shape society. In light of this eventuality, Turkle's extensive examination of children and the way they view computers is warranted.

As a psychologist, Turkle takes a developmental view of children's concerns vis-a-vis computers. "The concerns of the youngest children were metaphysical" — e.g., are computers alive?

"At 8, 9, and 10 years old, children are

preoccupied not by metaphysics but by the need to master. . . . [Their] primary interest in computers is in what they can do with them.

"With adolescence, there is a return to reflection, but this time reflection is insistently about the self." Then on to the "second self," two manifestations of which are obsessive-compulsive behavior (hackerism) and artificial intelligence aspirations.

In Turkle's view, these two camps are diametrically opposed, at least in the eyes of the hackers. The artificial intelligence crew, according to the hackers, is merely technicians out to solve the problem. Hackers love programming for its own sake.

Is a computer destined to become your alter ego? *The Second Self* strongly implies so. Yet even though Turkle spent six years on research and field work for this book, her conclusions, provocative as they may be, are still largely speculative. It's still too early to tell about the ultimate impact of computers on cognition or metaphysics. That they will continue to affect the way we think and act is undeniable. As Turkle points out, some people — through a need to anthropomorphize computers or for whatever reasons — pepper everyday speech with computer jargon. An example: A professor refers to a lecture as "hardwired," meaning that he can give it by rote.

Turkle's own academic bent shows up in her occasional repetitiveness and her prose, which is not exactly a paradigm of stylistic panache. Ironically, she steers clear of the customary academic pitfall — logorrhea — and uses a utilitarian, though laconic, style.

The Second Self is a "crossover" book — a general interest work with a noticeable textbook influence. Whether you're prepared to accept all of Turkle's theses, her book is an exhaustive* and provocative, though speculative, examination of the effects of computers on humans — and vice versa. □

**The Second Self* is loaded with footnotes. Because of this extensive annotation, the book is as valuable as a reference to further reading as it is in its own right. In fact, some referenced works on psychology, thought processes, child development, and other areas look as though they may be more intriguing than *The Second Self* itself.

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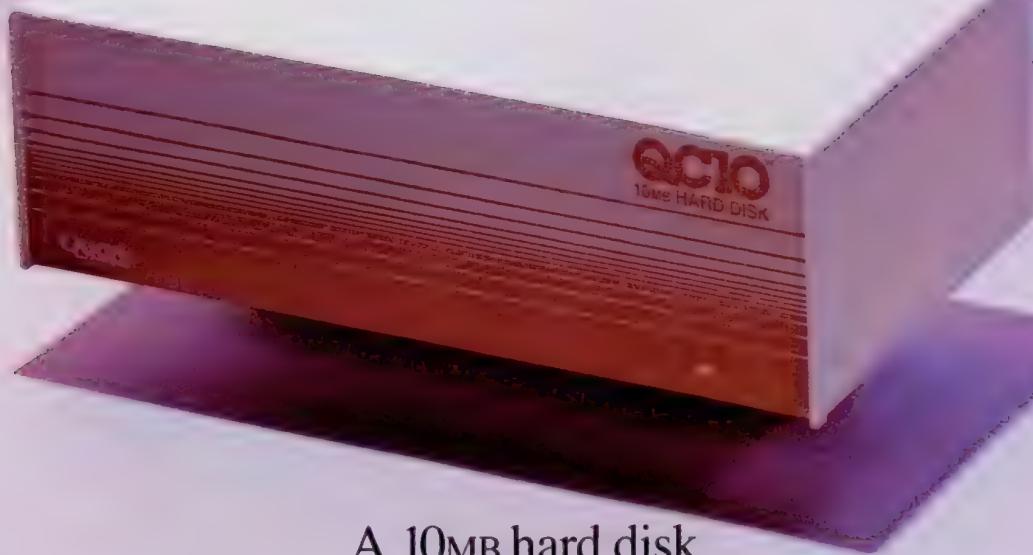
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**Catalyst works on the Apple IIc, IIe and Apple III. It is not compatible with Macintosh.

Photography by Barbara Kasten

FROM THE NEWS DESK

Atlanta is abuzz: Software conglomerate Management Science America (MSA) has put Peachtree on the block. Anybody want to pick up a nice little accounting software firm for a few million? MSA has never made a secret of its discontent with the profits Peachtree has returned compared to the bucks spent on advertising and promotion. Peachtree revenues have jumped from something like \$3 million in 1981, when MSA bought it, to more than \$20 million last year, but profits haven't exactly flowed like water: We understand Peachtree contributed only 3 percent to MSA's \$30 million bottom line last quarter. Not through lack of trying: Peachtree, which started out with an unglamorous but solid set of accounting programs for microcomputers in 1978, updated its accounting software, sold a version to IBM (which was also disappointed in the sales that followed), and expanded into word processing, office productivity, and educational software. The buyer of Peachtree will even get a glossy magazine, *Peachtree Quarterly*, a clever scheme to get users to shell out \$3 a shot for a software catalog. The buyer will also get a small can of worms known as the Peachtree-Apple lawsuit. (See story on page 20.) Any takers?

Ovation says goodbye for now: Ovation Technologies has laid off all but four employees. The receptionist, two financial types, and president Thomas J. Gregory are the sole survivors, but only for the moment. The firm is trying not to file for bankruptcy under Chapter 11, one of the four told us, but it doesn't look promising. After two years and millions in investment capital, not to mention cover treatment in (other) computer magazines, Ovation still hasn't come out with its promised integrated program of the same name, and now it may never finish it, unless the program can be sold to someone else as a company "asset." For background on the in-house wrangling toward the end, see Q&A interviews with the Norwood, Massachusetts, firm's one-time chief software designer, Robert Kutnick, in *InfoWorld's* October 8 issue, and with president Gregory in the October 15 issue.

Ups and downs: Hard disk and local area network maker Corvus Systems, whose business has been staggering lately (profits down 80 percent this quarter over the same quarter last year), just nabbed a \$5 million, three-year contract from Holiday Inns for its system network architecture gateway product (connects micros to mainframes) and another contract with a French bank for \$5 million; last month Corvus rang up an \$8 million contract with an unnamed company. That's a substantial jump in total business, so they're cheering in San Jose, California. . . . Dysan, disk maker to the stars, whose business and stock have fallen so low the company has been forced to sell off or close its experimental businesses, announced it was merging with Xidex, a brash upstart disk-reproduction outfit that was one of the causes of Dysan's problems in the first place. Dysan's stock rose two points while we were still looking up its telephone number. The troubled Santa Clara, California, firm used to have the lock on the reproduction market; most of your software came to you on Dysan disks. But that was last year. . . . Apple Computer really knows how to keep to a schedule: Its Fat Mac may be early and its Little Mac software may be late, but John Sculley's profit predictions were right on target. Last year the Apple prez said profits would be down to 8 cents a share until the fourth quarter, when they would rebound to 40 cents if the Mac were successful. In fact, they rebounded to 50 cents a share, right on schedule. (The extra dime is apparently because of unexpectedly strong sales of the Apple IIe.)

How much is software worth? Marketers of the fat \$500

packages will jaw about perceived value, research, and advertising costs until your ears fall off, but a clever publicity gambit by a small Alameda, California, firm has had some interesting results. Noumenon Corp. announced it was going to let the market decide the right price for its integrated program, Intuit, by dropping the price from \$495 down to \$50 for a start, then raising the price by \$20 each week until people stopped buying. Now we have a chance to see what people are *really* willing to pay. The envelope, please: The answer is \$89.95 for an integrated program with the usual word processing, database, spreadsheet, etc., that rated two disks in our October 8, 1984, review. The firm says sales were really hot until the price exceeded \$100. By the time the price hit \$210, sales were dead. So \$89.95 it is. Now the only question is: How much is a program that rates *three* disks worth?

Rumors, we get rumors: How bad is the software business these days? A hotshot programmer of our acquaintance, the kind of guy who normally has no trouble selling his works to eager publishers, has spent the last three months trying to interest some software company in his latest dazzler, to no avail. He's actually beginning to worry. . . . Whole shelves of software are being held back by publishers fearing the frost. Spinnaker has held up releasing its new line of Windham Classics, and now we hear CBS has put a hold on its new series, Smithsonian, until the field shows some signs of warming up. Maybe Christmas will break the logjam. . . . Now, a tech-talk item for those who enjoy that sort of thing: The 12-megahertz crystal clock chip in the IBM PC AT is in a socket, not soldered, so it's replaceable, right? So somebody tried replacing it with an 18-megahertz crystal and, sure enough, it worked! (He did have trouble with the 80287 math coprocessor, a diagnostic program, and clock-sensitive software such as modem programs.) Let's speculate that IBM is thinking ahead, ready to leapfrog the competition at a moment's notice by speeding up its already-fast computer by another 50 percent. Whew!

Zenith defenders fight back (and jump down editor's throat): While admiring Zenith Data Systems in the October 29 News Desk, we managed to make three errors in only one paragraph, a record. First, the Z100 is not a CP/M machine but a dual-processor, CP/M-MS-DOS computer, as irritated Zenith users hastened to make clear to us by flooding our mailbox. Second, those Z100s the military bought last year were not for military schools but for the armed services in general. They are being used as office machines, not school computers, says reader Isaac A. Davidian, who ought to know because his Data-Tech firm trains people on the machines at two California military bases. Third, we got a call from a distressed Air Force lieutenant colonel who was involved in the purchase of the Zenith Tempest computers. He says the computers didn't cost \$10,000 but more like \$3,000 each: The rest of the contract was for peripherals such as printers and modems. He mentions this because it was the first time the Air Force had used competitive bidding on such a contract, and the results were spectacular: The Air Force *used* to pay up to \$10,000 each for Tempest-specification micros, but thanks to competitive bidding, it got a really good deal from Zenith on a superior machine.

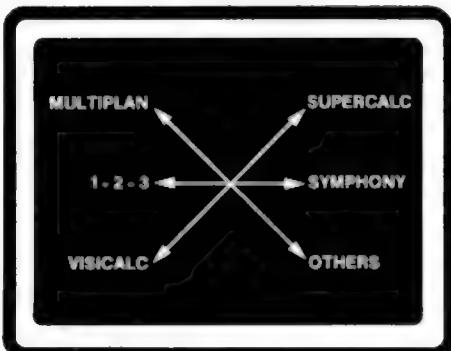
Name games: A reader sends a clipping from the *New York Times* classified ads in which someone offers to sell an IBM PC with "duel sloppy disc drive." We've felt that way ourselves some days. . . . There's a new relational database program out for the Macintosh, dubbed Mac Lion. Our reaction is to call for an industrywide moratorium on cute Mac product names.

Michael McCarthy

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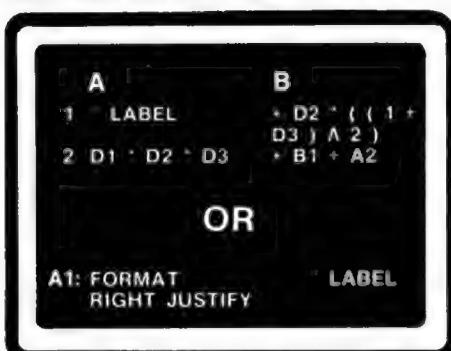
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## PORTABLE COMPUTERS

# OSBORNE SHOWS NEW COMPUTER

*Long-promised superportable delivered by reorganized company*

BY PEGGY WATT

Reporter

**O**sborne Computer Corp. is testing its phoenix qualities with the introduction of the Vixen, the computer that even the company's bout with bankruptcy couldn't kill. What's more, the company plans to reward the friends who stood by it in the flames: Shunning the usual mass marketing tactics, the company will take its first orders directly from Osborne users groups.

The few dozen dealers still selling Osbornes will receive early shipments of the \$1,298 Vixen, an Osborne 1-compatible CP/M machine with 64K of random-access memory; two double-sided, double-density disk drives that hold 400K each; and a 7-inch, 80-character amber monitor — all crammed into a compact 22-pound package with one parallel and one serial (RS-232) port.

In the tradition that Osborne originated, the Vixen (formally known as the Osborne 4) will also include free software: the CP/M 2.2 operating system; Wordstar and Mailmerge for word processing; the Supercalc 2 spreadsheet program; the MBasic programming language; the Osboard graphics package; Turnkey, for redefining function keys; Desolation, a game; and Media Master, which converts disk formats so data recorded on other computers can be read by the Vixen. A hard disk will be available separately for \$1,495.

Hitting the scene with the Vixen is the IBM PC-compatible Encore, or Osborne 2, which has been available in Europe for the past three months and is essentially the same machine as the Pivot being sold by Morrow Design. Vadim Designs of Milpitas, California, created the machine and licensed it to Morrow for domestic distribution and to Osborne for the European market. Osborne recently renegotiated to allow its domestic dealers a crack at the 9½-pound portable. The dealers will begin selling the Encore next spring.

The \$3,000 Encore features an 80-column, 16-line liquid crystal display, 128K of random-access memory (expandable to 512K), and two 5½-inch disk drives. A single disk drive model will also be available, for about \$2,500. Both the Morrow and Osborne models include internal modem, clock, and calculator, and run on a battery or alternating current.

"There's a lot of interest in Osborne, but a product is a tremendous aid in reestablishing our credibility," says Ron Brown, president of the reorganized Osborne Computer Corp. and formerly

bankruptcy in September of last year.

Employees of the old company, who were furloughed when the company went bankrupt, will get up to \$2,000 each in owed vacation pay when the firm emerges from Chapter 11, the officers say. The reincarnated firm has already moved into new Fremont, California, offices one-third the size of the site inherited from what company directors call the "old" Osborne Computer Corp.

The company twice delayed the Vixen, once to concentrate on the Executive, and again as financing failed in the months before bankruptcy. "It's kind of a ghost product," McReynolds says. "All the old Osborne employees were involved." Engineers on contract kept working on the Vixen and former employees still pondered design and development. They presented the reorganizing officers with a nearly finished product.

"This design has been going for two years," says Fred Coury, the consultant who started the project for one Osborne Computer Corp. and finished it for another. "I feel good about it." He has seen the Vixen change from a model with a 5-inch screen and single-sided drives to the

present system. The hardware was fitted to the software and the physical package couldn't be much tighter, he notes. Coury calls it one of the most tested products in microcomputing's short history.

Even Adam Osborne, founder of the original firm but not a part of the reorganized company that still bears his name, says he has a soft spot for the Vixen. "It's a very sweet little machine," he says. He won't promise to buy one himself but says there's still a market for a CP/M system with software included.

Osborne's first market is ready and eager. "I'm so tickled that they are finally announcing it, because I can now admit I have this gem," says Gale Rhoades, executive director of the First Osborne Group (FOG) in Daly City, California, who received an advance model. She says the Vixen runs nearly all the public domain software in FOG's library, and runs it



Chodi McReynolds, head of operations; Jim Schwabe, product marketing director; and Ron Brown, president of the new Osborne Computer Corp., with the Vixen

vice president and general manager of Osborne's international division. Brown, along with vice president of operations Chodi McReynolds and director of product marketing Jim Schwabe, reorganized Osborne and hopes to revive the 2-year-old firm that ended its skyrocketing growth as a bankrupt falling star a year ago.

Osborne's October 25 product introduction coincided with what its officers hope is the company's last month in bankruptcy court, to be followed by a limited stock offering to repay the last of its old debts. They hope to raise \$3 million in operating expenses for the new company, with 20 percent of the next stock offering reserved for unsecured creditors of the original company. The reorganized company has already paid about \$10.5 million of the \$15 million promised to creditors. The creditors lost more than \$45 million when the company filed for

faster than either the Executive or Osborne 1. "The interrupt-driven system makes all the difference in the world," she says. "They took the best of the ideas that grew out of the users of both machines."

Rhoades says her favorite feature is the flexibility of the function keys, which can be reassigned with a few strokes while in the middle of a program. The Turnkey program creates a shell and menu-driven system that also combines keystrokes. "I kind of miss the disk pockets of the Osborne 1," Rhoades says, "but the size makes up for it." She agrees that current Osborne owners will snap up the Vixen as fast as it comes off the line: "The existing user base is going to go nuts."

The new company intends to cultivate its fans conscientiously. A year's membership in the national and local Osborne users groups is bundled with every Vixen; current members will get a year's free renewal. "We have an obvious customer base," Brown says. "We know where our market is. Distributors have never been our strong point." He doubts Osborne will ever get back into the chain computer stores, preferring small, well-scattered neighborhood shops.

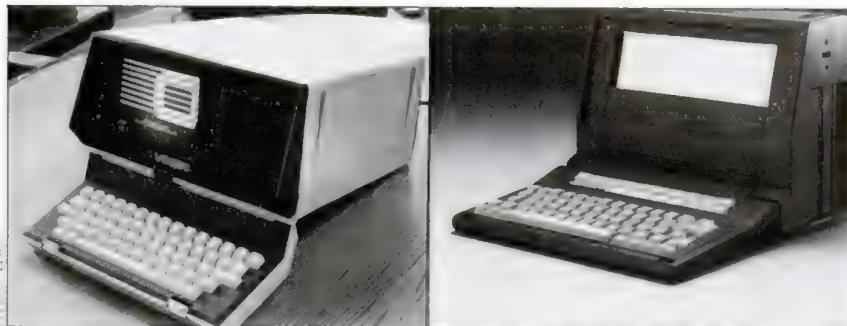
"We're going to go out of our way to make sure the initial units will be sold to active members of users groups," says Dave Miller, vice president of marketing and sales, who headed the old company's still-successful overseas marketing department. "They're why we're still here." He says dealers will be "value-added" types, who will add their own services or software. Approximately 150 dealership applications are already pending, he says. Miller doesn't expect to have enough Vixens to ship to all the dealers until the first of the year, when the company plans to produce about 1,000 each month. "We have orders already," he adds.

Dealers may be few, but they're enthusiastic. "I think Osborne's right on with the Vixen," says Philip Moore, who operates the supply shop F/M Comm out of his Menlo Park, California, home and also heads SMOG, the San Mateo Osborne Group. "These Osbornes are workhorses. In fact, I think if I don't throw it in the truck and bounce it around every once in awhile, it gets sick." He says he's done his part to bolster Osborne Computer Corp.'s bankroll, selling computers to users group members steadily throughout the bankruptcy.

Farther south, in Orange, California,

Gene Berg says he's saving space for a Vixen or two in the computer sales room adjacent to his Volkswagen parts shop. He buys Osbornes at auctions and resells them with original programs that calculate auto compression rates and maintain a VW parts catalog, along with providing a step-by-step introduction to computers.

Schwabe says the Vixen's capability to



The Osborne 4 Vixen (left) is a 22-pound, 8-bit CP/M portable with double-sided 400K disk drives and a 7-inch monitor; the Osborne Encore (right) will be available in the spring.

communicate with mainframes through 3270 emulation software expands its scope and will help extend Osborne's market. "This product will be the workhorse machine you can expect to see on a lot of desks," he says. "It's designed with speed in mind." The Z80A processor runs at 4 megahertz, but a souped-up disk-access system runs Wordstar, a disk-bound program, four times faster than the average IBM PC-compatible machine.

The ever-optimistic Adam Osborne predicts the Vixen could even kill Kaypro, another price-conscious 8-bit CP/M computer maker that thrived when Osborne was undergoing its shakeout. Kaypro vice president David Kay says he's not worried. "There's a lot of room out there," he says. He calls a 7-inch screen "substandard"

and says the Vixen's price tag is too high.

The standard Kaypro II sells for \$1,295 with a 9-inch screen, but the two single-sided disk drives hold 185K, less than half the capacity of the Vixen. The more directly comparable Kaypro 4, with double-sided disk drives of 360K capacity, costs \$1,995 but also includes a built-in modem and clock card. A version of the Kaypro II with one disk drive sells for \$900. Similar CP/M systems, Morrow's MD1E and MD3E, sell for \$999 (one drive) and \$1,499 (two drives). Osborne's Brown says he'd like to steal some customers from the Apple IIc, which is priced similarly but offers the option of color.

As enthusiastic as they are about their new product and new plans, the directors of the revived Osborne Computer Corp. acknowledge they're starting almost from scratch and are still a company that has to count its pennies. Press invitations to the product announcement requested a "modest charge" for news releases, photos, and press packets, which are usually provided free. The company promises to refund the \$2.50 fee in return for a copy of resulting news stories, noting it still can't afford a clipping service.

The fee is more tongue-in-cheek than outstretched hand, says Tom Mahan of Mahan Public Relations, newly associated with Osborne. "We were just trying to convey that the company has retained its sense of humor," Mahan says. "We're still on a pay-as-you-go basis." □

#### CORPORATE STRATEGIES

## ATARI PAYS OFF SOME CREDITORS

*Other suppliers, frustrated, take their cases to court*

BY KATHY CHIN  
Reporter

**A**tari Corp., facing some 15 lawsuits filed since Warner Communications Inc. sold the floundering company for \$240 million to Jack Tramiel in July, is moving to settle with at least some of its 50 creditors.

In the past two months, the Tramiel sons, Sam, president, and Gary, vice president of finance, have responded to several suppliers with either oral promises, personal meetings, or checks in the mail.

James L. Copland, vice president of

marketing at the new Atari Corp., acknowledges that the firm is working to settle its debts but would not give exact details. "Jack Tramiel does not screw people," he says, responding to vendor complaints that Atari has been dodging debts to smaller, more vulnerable vendors. "He's a very astute business manager. He's firm but fair."

The settlements come as a pleasant surprise to many whose payments were held up when Tramiel took over at Atari. When Gary Rambaran, president of Lisa's Paperworks & Packaging, recently received a check for \$3,800, he was shocked. "I was beside myself with joy,"

he says. The Newark, California, firm was hired to package Atari products and collate and fold promotional pieces. "Atari was 45 days late with its payment, and it gave us a bit of concern. As a small business, \$2,000 to \$3,000 is a fortune to us."

According to Rambaran, his contacts with Atari Corp. have been positive. "When they were on the phone with me, they were very polite," he says. "I was told that Gary Tramiel, Atari Corp.'s vice president of financing, would return my call, and he did so. I never felt there was any trickery involved."

Athana, a magnetic media company based in Torrance, California, has also settled with the Tramiels. "We met and settled the whole account," says Bert Fitzgerald, Athana's vice president. "I'm not surprised. We saw something like this coming. We are willing to continue to do business with them." Fitzgerald says the settlement amounts to several tens of thousands of dollars.

Even though vendors are getting paid, some remain bitter toward the Tramiel empire. Bob Langley of Unique Litho in Fremont, California, finally did get the \$3,600 owed to him for printing Atari manuals. Langley and his wife, Celia, run the operation. Both say they will never work for Atari Corp. again. "We have four children and another one on the way," says his wife. "You can't run a business or support a family when people do that."

In many cases, the Tramiels have personally met their creditors to settle accounts. Howard Pearlmuter, head of Softweaver of Santa Cruz, California, was able to collect a \$60,000 software development debt in three payments after meeting with the Tramiels. Earlier, Pearlmuter generated publicity for his attempts to organize Atari creditors to take action against the firm. Since his negotiations with the company, however, he has ceased rounding up members for his would-be coalition.

New York's Doyle Dane Bernbach advertising agency, one of the larger creditors, negotiated an \$11 million settlement with Atari Corp. Most creditors who have received a settlement, however, appear to be small or medium-size companies.

One vendor charges that Atari Corp. will pay only those suppliers it will need in the future, although few of the paid-off creditors contacted by *InfoWorld* are now

doing further business with Atari Corp.

Some larger creditors have ended up with less than they originally requested. Michael Brodie, vice president of International Computer Group in Chatsworth, California, says that his software firm had to settle for less than the six figures it requested. Brodie believes that a majority of the creditors that were paid had to settle for less than they were owed. "I'm pretty soured by the situation, but at least vendors are getting something."

Gary Rasp, head of Limited Edition Software of Fremont, also got less than he was asking. His firm was one of at least 12 contractors hired in pre-Tramiel days to work on the Atarisoft project, converting Atari coin-operated games into game software for a range of home computers. When Tramiel came on board, those contracts were suddenly dropped.

Limited Edition Software was involved in developing products, and Rasp says Atari has agreed to pay for finished goods and development costs, a sum between \$200,000 and \$300,000. Payment will be delivered in staggered amounts within 60 days. "We are getting less than what we want, but fortunately the debt did not have a big impact on the firm," Rasp says. "We did not have to lay anyone off."

Atari Corp. marketing chief Copland claims some suppliers are suing for more money than necessary by adding all kinds of costs. "You can't say you've done \$2.8 billion worth of work and then sue us for \$10 billion," Copland says. "A lot of these companies are adding fuel to the fire, and that's a lot of B.S."

Copland also says that while independent contractors charge Atari Corp. with refusal to pay, many of them did not meet their deadlines as written in their contracts. "There are so many different issues that it's a very confused state of affairs. But whether the

company is rich or poor, we are indifferent. We are an equal opportunity employer as well as payer."

Not all of Atari Corp.'s approximately 50 creditors have been paid, and many are suing. Quality Software Inc., another Atarisoft contract developer, has received no money. The firm, also based in Chatsworth, sued Atari in August for failure to pay for finished goods and for breach of contract. Bob Christiansen,

Quality Software executive vice president, says the firm had to lay off three programmers in July. The eight-employee company has had to hold off its own creditors while waiting for Atari Corp. to pay it for more than \$150,000 in services. Quality Software was recently granted a writ of attachment by Santa Clara County Superior Court in San Jose, California, to freeze \$66,000 in Atari assets pending judgment of the case.

"Atari said it was interested in settling," Christiansen says. "But it just doesn't return our phone calls."

I wish I could forget the whole thing and get on with life. I don't know of anyone who feels he has a future dealing with Atari."

Others are frustrated by their inability to reach Atari Corp. officials. "I wasted five to six weeks of my time making phone calls and sitting around the house waiting for Atari to call me," says Paul Parker, a programming consultant in San Jose, who requested \$30,000 for six months' work.

Recently, Atari Corp. officials notified Parker that they were not going to pay him, Parker says. An independent businessman, he was not working on any other project at the time. When Atari Corp. failed to come through, he says, he had to draw off previous resources to pay his rent. "I told my attorney to go ahead and sic 'em," Parker says. "I cannot abide being treated this way."

Johnson, Pedersen, Hinrichs & Shockey, a graphic design group in San Francisco, is about to sue after waiting four months for payment. The firm will file for approximately \$104,500. "I'm really confused about whom to sue," says Diane Dreyer, a project coordinator for the design company. "We are a small firm, and we're not sure whom to approach. We decided to let our attorneys take care of the whole thing." □



*Softweaver's Howard Pearlmuter was organizing creditors when Atari paid up.*



*Faced with lawsuits, Jack Tramiel is settling some of Atari Corp.'s debts.*

SOFTWARE PUBLISHING

# BRUCE SUES OVER WORDVISION

## Bruce & James unhappy over Simon & Schuster deal

BY DENISE CARUSO

Reporter

The "Bruce" half of Bruce & James Program Publishers has left the company so he can sue the distributor of the firm's Wordvision product and others for \$15 million.

Named as defendants in the civil suit, filed in September on behalf of cofounder Bruce McLoughlin "and all other stockholders of Bruce & James Program Publishers similarly situated" are publishing house Simon & Schuster, which has been distributing Wordvision; Simon & Schuster executives Mitchell Grossman, assistant to the president, Frank Schwartz, president of the company's Electronic Publishing Group, and Alvin B. Reuben, executive vice president and national sales manager for Electronic Publishing; and John Brockman Associates, agents for Bruce & James in the distribution deal.

McLoughlin says that in April 1983, Bruce & James signed an agreement with Simon & Schuster Electronic Publishing Group to distribute its Wordvision program through Simon & Schuster's well-developed bookstore distribution channels. The program, billed as a cheap yet sophisticated word processor, was originally intended to sell for \$49.95 but ended up being priced at \$79.95. McLoughlin says Bruce & James' responsibility was to manufacture the package and "turn Wordvision over, lock, stock, and barrel" to Simon & Schuster. "We put all the money up for the disks and paper and everything with our credit. We were to get our profit from the sales. They got a distribution fee. But they have it all."

Bruce & James delivered 20,000 copies of Wordvision to Simon & Schuster in December. McLoughlin says that as of mid-October, "we still don't have one nickel from the firm," except its initial \$150,000 advance. "Payment No. 1 was due around May 1. Their accounting initially indicated a payment approaching six figures. When I called them and told them I was coming for the money, they said not to bother, that we weren't getting any. They said there would be a tremendous amount of returns, and if they gave us the money, we would spend it on creditors and they would end up short. But in our contract, specific percentages were set forth for those returns."

McLoughlin says Simon & Schuster is supposed to make timely payments to

Bruce & James of profits from which a previously established amount was subtracted to cover the cash advance and possible product returns. (Bookstores generally have the right to return unsold books for full credit.) He says that Simon & Schuster arbitrarily changed that sum in October 1983 and "they've even breached that, in my opinion."

A spokesperson at Simon & Schuster wouldn't comment on the suit, saying the company's policy is to not discuss pending litigation. But a May press release from the company, sent when Bruce & James first started talking to the press about its problems with Simon & Schuster, claims the publisher has fulfilled all its contractual responsibilities.

"Bruce & James' failure to deliver the product when planned, and its failure to promote the product after its release, are likely to cause substantial returns from the marketplace," says the release. "Accordingly, Simon & Schuster has and will continue to do what it believes necessary to fulfill the intent of its contractual arrangement with Bruce & James."

According to papers sent to Bruce & James in January by Simon & Schuster, the distributor received 18,500 units. Simon & Schuster told James Edlin (the "James" of Bruce & James) that of these, some 6,000 were actually returned, making the current Wordvision customer base approximately 12,000. Edlin says his own calculations agree with this figure.

McLoughlin wanted to sue, but Edlin didn't, Edlin says. "I felt that at the moment it was more beneficial to try to negotiate a quiet and mutually satisfactory parting of the ways," Edlin says. "I don't think litigation serves the best interest of the company or its creditors or anyone else." So McLoughlin broke from the company — though he and Edlin still hold 47 percent of the company's stock apiece — and has filed suit, asking \$10 million in compensatory and punitive damages from Simon & Schuster, and \$1 million each from Grossman, Schwartz, and Reuben of Simon & Schuster.

Claiming in the lawsuit that his agent,

John Brockman, knew that Simon & Schuster wouldn't honor its royalty contract with Bruce & James, McLoughlin is also suing John Brockman Associates for \$2 million in compensatory and punitive damages. Brockman says the claim is "without merit, as far as our agency is concerned. Beyond that, I'm not going to comment."

McLoughlin says whatever money is awarded him because of the suit will go directly into the floundering company, which at this point is "flat broke."

James Edlin largely agrees with his former partner, saying it's no secret that things are "more than a little rocky" in the company's relationship with Simon & Schuster. "Bruce thinks they're responsible for destroying the company. I won't comment on that specific litigation, but I have said in public before that they have reasons to be angry at us and we have reasons to be angry at them."

One source with knowledge of the publishing industry, who requested anonymity, tells of conversations with McLoughlin about Simon & Schuster, and of later conversations with a Simon & Schuster employee.

"Bruce & James was totally shafted by Simon & Schuster," he says. "They told Bruce they wouldn't pay their accounts receivable because it would be cheaper to

litigate. They figured the company was too broke to litigate, so they would just keep the money. Later, when I was dealing with Simon & Schuster about something, I told them it was the rumor going around. And the guy [at Simon & Schuster] said it was the truth."

The Bruce & James story, according to both McLoughlin and Edlin, is a classic study of culture clash between book and software publishing. Simon & Schuster's attitude about late delivery is a perfect example, Edlin says. Simon & Schuster put Wordvision in its catalog and announced it "months and months" before it was ready. "We were moderately successful in getting advance orders," Edlin says. "But Wordvision was shipped at least nine months later than we'd anticipated. And the computer canceled orders after 90 days if they weren't filled." McLoughlin agrees, but says that most of those orders were reconfirmed and shipped.

"Book publishing operates with reasonable predictability of product and long lead times," Edlin says. "Salespeople



James Edlin, of Bruce & James, is now selling Wordvision from his kitchen.

make two calls a year, with a fall list and spring list. It's a very organized, very rigid lead-time-oriented system. My experience of the software business is that it doesn't fit comfortably into that."

Although Bruce & James hasn't severed its distribution arrangement with Simon & Schuster, Edlin says he's now selling Wordvision directly from his kitchen-table operation in San Francisco, and doesn't have time to pay much attention to

the problems with the distributor. "Given that I'm doing what 12 people used to be doing, I've let that take a lower priority than trying to resuscitate sales of Wordvision and help the company in other ways," Edlin publishes a newsletter called *Wordvision News* and has begun selling a subscription service to upgrades for the product — for cash in advance.

"Adam Osborne would call this 'forward financing,'" Edlin says. "But we

want to keep supporting Wordvision and this is the only way we can do it right now. Users have always been on our side. That's why I've been describing the product as the 'Hill Street Blues' of software. Word has not circulated widely enough about how much people love and recommend Wordvision. One reason I feel the charter subscription thing will work is because of the fervent support of people who know the product." □

## RETAILING

## RADIO SHACK PLAYS SHOW HOST

Show tries to support third-party software sellers

BY KIM BERGHEIM

Reporter

In a move designed to overcome charges of indifference to third-party vendors, Tandy/Radio Shack hosted a computer show for some 125 software companies.

Tandy supplied the location — the Los Angeles International Airport Hilton, with 125,000 square feet for booth space and computers — and the publicity for the October 3-4 show, plus samples: About 50 units of the Tandy 1200 (Tandy's new IBM PC XT compatible) and 150 of the Tandy 2000 (a high performance MS-DOS computer) were spread among the booths, along with 50 other assorted Radio Shack machines. About 5,400 people attended the Tandy/Radio Shack Personal Computer Showcase, including store personnel, users, and educational and business representatives.

"We want to show the public that there is software for Radio Shack computers," says Ed Juge, director of market planning for Tandy. "There are between 400 and 500 items listed in the Radio Shack catalog, but people don't realize that. People look for software in stores and see IBM and Apple software. Our software is sold only in Radio Shack stores."

The Los Angeles show was the third in a series of five such Tandy/Radio Shack showcases being held nationwide in September and October. The first two were in Houston and Atlanta, with attendance of 4,700 and 3,800 respectively. Final shows are scheduled for New York and Chicago.

Juge says the showcases are also designed to shatter the myth that Radio Shack is trying to hide smaller software companies from the public. "That's crazy," he says. "That's a myth created largely by people competing against Radio Shack. The showcases let people draw their own conclusions."

Software vendors appeared happy to show up and get some low cost publicity

for their wares, with blessings from Radio Shack. "It's a cheap thrill for the amount it costs us," says Paul Lundell, director of sales and marketing for Clinical Data Design, a Milwaukee maker of medical office software. "Tandy has a huge sales force, and for a small company, it's a great way to show our products to the potential market."

Radio Shack's move to embrace third-

## HARDWARE COMPANIES

## MORE IS LESS AT FORTUNE

Figures back up firm's claim of increased efficiency

BY KIM BERGHEIM

Reporter

There seems to be both more and less than meets the eye to the layoff of almost 50 employees by Fortune Systems Corp. last month. Layoffs are usually a sign of trouble for a firm competing in the micro-computer field.

Many troubled firms claim their layoffs are really signs of "improved efficiency and competitiveness," but Fortune offers statistics to back such a claim.

"Since January 1984, Fortune has increased manufacturing by 30 percent while reducing the total head count by 33 percent," says Fortune president James Campbell. Fortune had more than 700 employees in January and \$12 million in sales; in October, 571 employees generated \$20 million in sales. More managers than workers have been lost, Campbell claims. "We had too many

party software is wise, says John Sheridan, project manager for Tandy software at Spinnaker Software of Cambridge, Massachusetts. Sheridan says he talks with a Tandy representative nearly every day.

Microsoft of Bellevue, Washington, brought a five-person staff to man its booth. Joe Vetter, account manager for Microsoft, says he appreciated the chance to talk with 500 to 600 store managers, a cross section of users, and non-Tandy owners at one time.

There was no sign, however, that Tandy plans to change its long-standing policy of selling only Tandy products in Radio Shack computer stores. □

expensive people for the revenue we were generating."

Fortune's layoff of 46 follows smaller layoffs earlier this year, and reduces the total work force of the Redwood City, California, firm to 525 employees.

In 1983 Fortune lost \$15.4 million, but

now the company is making a turnaround. As of June the company had netted \$15 million in 1984. Fortune has \$44 million in cash remaining after a 1983 stock offering. Campbell says the company is working to lower the break-even point. "We want to position for our best revenue quarter ever," he says. "We have a really strong balance sheet."

The company plans to concentrate on original equipment manufacturing agreements (by which machines are made for labeling and sale by other firms) and large corporate accounts. "We're cutting down on our direct sales force and will emphasize specific industries," Campbell says. □



James Campbell of Fortune Systems Corp.

## LEGAL CASES

**PEACHTREE COUNTERSUES APPLE***Apple pursues case despite death of Apple III line*

BY CHRISTINE McGEEVER

Reporter

**A**pple Computer won't let its Apple IIIs die in peace. Litigation over a marketing agreement between the Cupertino, California, computer manufacturer and Peachtree Software of Atlanta is refocusing attention on the ill-fated computer that Apple quietly began phasing out last April.

Court action began in August, when Apple filed a breach of contract suit against Peachtree in U.S. District Court, charging that the software company failed to meet its deadline in producing a version of its accounting software adapted to the Apple III computer. Apple requested payment of \$1,275,000 in damages.

Peachtree responded with a countersuit charging that Apple broke the contract first, by withdrawing marketing and advertising support for the ill-fated computer and later by halting production altogether. Peachtree is asking for \$1 million in payment for damages and is demanding a jury trial.

Peachtree general manager Larry Smart says he doesn't think the issue is really the timeliness of Peachtree's performance. "I just think we upset a lot of people," he says. He did not say specifically how.

The suit is not affecting Peachtree's relations with Apple on other products, he says, adding that he believes the case will be settled soon "because there are much more important things going on" between the two companies. He calls the Apple III affair "old history."

Apple attorney Bruce G. Vanyo, of Wilson, Sonsini, Goodrich and Rosati in Palo Alto, California, will not comment on specifics of the case but says that it will probably not come to trial "for several years" because the court's schedule is full. The chance that the two companies could settle out of court "is always possible," he says.

The two companies originally entered into a marketing agreement in January 1982 to produce Apple III versions of Peachtree's general ledger, accounts receivable and payable, inventory management, sales invoicing, and payroll programs. The contract was worth approximately \$700,000. The Peachtree suit says Apple agreed to accept "the worldwide exclusive responsibility to reproduce, use, market, and distribute the Peachtree software products" and to "use its best

efforts to maximize the sales of Peachtree software." Apple also agreed to produce and promote the Apple III product line until at least September 30, 1984.

Later, however, Apple told Peachtree that it would not fulfill the agreement. In November 1982, according to Peachtree, Apple representative William Fischette told the software company "that Apple intended to not go forward with the original marketing agreement and would not honor its obligations in connection with that contract. Apple's stated intent was that it had decided not to market and support the Peachtree software products."

The two companies then renegotiated their contract. Peachtree asked for \$50,000 in "out-of-pocket expenses" for its work to that time, plus \$375,000 in promised royalties and \$200,000 to cover the cost of marketing and production. In the second agreement, Peachtree actually received \$200,000 from Apple for costs incurred, and both agreed that each would still produce and promote the software.

Apple is charging that Peachtree officials did not complete the software in time and, furthermore, committed fraud because they knew they had no intention or ability to meet their contractual obligations. Apple charges that Peachtree's parent company, Management Science America (MSA), "aided and abetted Peachtree Software in making material statements which were untrue," and the computer maker is seeking damages for

negligent misrepresentation.

(MSA has announced plans to sell its Peachtree subsidiary, for reasons apparently unrelated to this case.)

Peachtree's Smart points out that the programs are available now and are listed in Peachtree catalogs. In fact, the products appear in Peachtree's quarterly catalogs for winter, spring, and summer 1983 and fall, winter, and summer 1984, but not all products are listed in each catalog.

Peachtree's countersuit is based on Apple's failure to comply with the second contract, says Smart, because Apple has discontinued the Apple III line.

First announced in May 1980 at the National Computer Conference, the Apple III appeared in dealers' stores five months later. The machine, priced at \$2,995 for the basic model, was plagued from the start with parts shortages and poor quality components, as well as software shortages. By December the Apple III Plus had been introduced to alleviate the problems. The III Plus came with 256K of memory standard, a functioning clock chip that replaced a defective one installed in the III, and an improved video display.

Apple ceased production of the III line of computers in April. By September 30 the firm had only two people remaining in the III division, manager Sid Hughes and his secretary. Calls from users are now being handled by the technical support division.

Apple estimates that 95,000 Apple III and III Plus computers were sold in the United States and 120,000 were sold worldwide before Apple converted its III plants to produce IIc's in April.

Apple's service and support policy is to provide five years for hardware and two years for software, according to an Apple spokesperson. □

## HOME COMPUTERS

**COLECO WON'T GIVE UP ON ADAM***Toy maker happy with its high priced giveaway*

BY KATHY CHIN

Reporter

**C**oleco Industries, proud maker of the still-popular Cabbage Patch doll, will "very definitely be in the computer business next year," according to Coleco executive vice president J. Brian Clarke. An improved version of the Adam computer, announced in June; new Coleco executives lured from the microcomputer industry; and a \$15 million advertising campaign seem to support Clarke's claim.

Although industry observers are already predicting the Commodore 64 will be the hottest selling computer this holi-

day season, analysts are confident the Adam Family Computer system will also sell.

The computer, aimed at the first-time user, comes with a built-in word processing program, a printer, and tape storage, and sells for less than \$750. Last year the Westport, Connecticut, company reported shipping 95,000 units. Kenneth Lim of Dataquest, a San Jose, California, market research firm, estimates that Coleco will sell approximately 320,000 systems by the end of 1984. Clarke's prediction exceeds that, but he would not be specific.

But no matter how hard Coleco tries to compete, its sales figures will not come

close to matching the Commodore 64's. Commodore will sell 1,710,000 units by year's end, according to Sandy Gant, a market researcher at InfoCorp, also in San Jose.

While Clarke hesitated to say when the Adam computer will be profitable, he did say Adam sales have increased as a result of the Adam scholarship program. Under the promotion, which ends December 31, Coleco promises to rebate \$500 to new Adam buyers with college-bound children. To qualify, children must have been under 18 on September 1, 1984, and must enroll in a four-year college before they turn 19. Coleco plans to rebate \$125 to parents at the end of each academic year.

According to Coleco spokesperson Donna Wolfe, many new users are already sending in their rebate coupons.

Many are puzzled as to how Coleco can afford the \$500 rebate on its low cost machine. Stores such as Best Products have already discounted the computer to as low as \$650, and others are selling it for even less. Because the units are manufactured in New York instead of overseas, Dataquest's Lim says each probably costs the company \$450. "Profit margins are very slim for the dealers."

Clarke says Coleco is "very content" with its profit margins. He says the rebate will not cost Coleco much. "We are expecting that we will actually spend less than \$500 per child, given the current dropout statistics," Clarke says. According to the National Center for Education Statistics in Washington, D.C., approximately 50 percent of the students who enter as freshmen actually finish college. Of the nation's high school seniors bound for college, 60 percent enroll in four-year colleges or universities.

But the rebate itself isn't what motivates Adam buyers, analysts seem to agree. "What it does is raise public consciousness," Gant says.

That it should. As of July, the firm allocated \$15 million toward a multimedia ad campaign to refine the Adam image and stimulate sales. The six Coleco commercials that run regularly on evening TV convey the notion that buying an Adam will make parents happier, children smarter, and unite families. Coleco has started running similar print ads in *Reader's Digest*, *Newsweek*, and *Time* magazines.

Coleco has further shown its commitment to the computer business by luring key executives from other firms. Charles Winterble, who worked at Commodore developing the Vic 20 and Commodore 64, joined Coleco in February as group vice

president of computer products. In June, Robert Baker, formerly manufacturing operations manager at Apple, was appointed vice president of electronic manufacturing in upstate New York.

Researcher Gant says Coleco can be profitable in the computer business. "It has plenty of distribution channels." The Adam is being sold nationwide through mass merchandisers such as Toys R Us, Montgomery Ward, and Target stores.

When Coleco missed its promised shipping date, or "window of opportunity," in mid-October 1983, analysts said

Honeywell provides third-party maintenance for the Adam. Another Honeywell center manager, in Chicago, says the Adam is a "solid machine" and that most of the hardware problems come from misuse of the computer by consumers.

Coleco is "really pulling out all the stops" to gain customer acceptance after suffering negative publicity throughout the year, says another analyst. Instead of a three-month warranty, the company now offers a six-month warranty with every machine. A Coleco consumer hot line has been established for Adam inquiries.

Lack of software still hinders the Adam's success. Although Coleco has steadily shipped software for the computer, the majority of the programs are entertainment and education products. "The Adam is 99 percent improved," says David Kennedy, head of the Adam Microhackers users group in New York. "The 1 percent that it is missing is software. The big developers are missing."

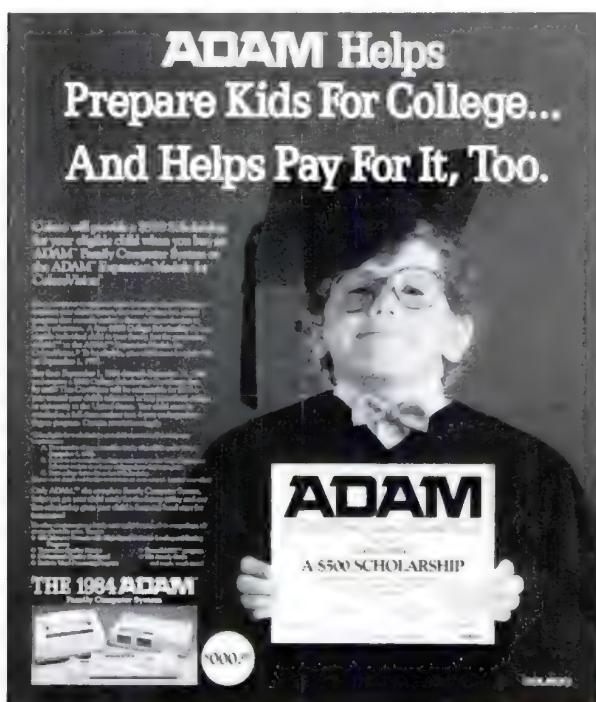
Stores are unwilling to stock products for a machine that isn't selling well yet, says Ken Williams, president of Sierra in Coarsegold, California. At least four mass merchandisers rejected Adam software from his firm, although they carry Coleco-brand software, according to Williams. He says Sierra had nine finished Adam products. "But from January to March, stores told us that they were unwilling to take the inventory risk," he says. "So we scrapped our Adam development and lost about \$200,000 on that one."

Coleco is asking several well-known software vendors to write programs for the Adam, according to Wolfe.

In hardware development, the company has recently shipped a modem, a 64K expansion module, and a 5½-inch disk drive that runs CP/M software. Asked whether the company will produce another computer, Coleco's Winterble says, "There is a lot of research and development going on. The market will have to tell us if it wants another machine."

Meanwhile, Coleco continues to ride high on the Cabbage Patch craze. Approximately \$150 million worth of Cabbage Patch Kids was shipped during the first half of the year. In May Coleco raised \$55 million from debenture sales, adding to its financial security.

One banking investor who requested anonymity says Coleco's decision to stay in the home computer business will depend on this Christmas. "So far, I have not heard any talk from the firm about getting out."



*Coleco's Adam scholarship offer is creating a lot of Christmastime interest in the revised home computer system.*

the toy company did not stand a chance in the computer market. The Adam finally shipped in January. "As far as we see it, the window is wide open," Clarke says. "Currently, no one has come forth with a package like ours."

The Adam and printer have undergone at least 330 technical changes, according to Clarke. Group vice president Winterble says many of these changes are unnoticeable to the consumer but are significant changes in the machine. He also says that reliability-testing time has been lengthened. Coleco says it has enhanced the word processing software, and the oft-criticized user manuals have been rewritten to provide more information. Feet were added to the printer to suppress the high noise level. The internal operating system and software were also revamped.

"I've worked on the Adam since day one, and it's definitely a dramatic improvement," says John Devine, head of the Honeywell Service Center in New York.

HARDWARE COMPANIES

## OTRONA GOES BROKE

*Maker of portable micro never turned a profit*

BY KATHY CHIN  
Reporter

In May, officials at Otron Advanced Systems Corp. in Boulder, Colorado, embarked upon a whirlwind press tour to announce their newest micro, the Otron 2001, an IBM PC-compatible portable/desktop system.

In October, the company said it was going broke and abruptly laid off its 175 employees.



the firm when it unveiled the Otron 2001 this spring. The 19-pound computer was sold in three configurations. The most expensive model cost \$4,495, featured 256K of memory and a 10-megabyte hard disk, and operated on alternating current.

Stanton says customers ordered approximately 1,000 systems a month. In its last few weeks, Otron was adding 15 dealers a week to its existing list of 200 dealers.

Unfortunately, the machine cost 30 percent more to produce than anticipated, says Stanton, who did not disclose the exact production costs. "We kept up with our orders, but it was harder to meet profit margins. If we had moved offshore for manufacturing, then we could have made it."

Otron Advanced Systems is the third high-tech company in Boulder County to undergo significant financial problems and layoffs within a 30-day period. In late September, MiniScribe, a hard disk manufacturer, laid off 530 of its 2,000 workers. The company says there had been a nationwide slump in sales because of the introduction of the IBM PC AT; potential customers wanted to wait for the new IBM machine before buying a hard disk for their IBM PCs.

Two weeks later, another firm in the area, Storage Technology Corp., announced third-quarter losses exceeding \$20 million, according to spokesperson Gordon Swartzfager. The company, which makes tape and disk storage products for mini and mainframe computers, laid off 1,500 of its 15,700 workers worldwide. Approximately 1,300 were from the Boulder division. □

*The Otron 2001, introduced in May, cost Otron Advanced Systems too much to make.*

The company has no need of Chapter 11 protection from creditors, according to Otron spokesperson Grace Stanton. Instead, Otron president James D. Lindner will be repositioning the company for acquisition. "He's looking at several prospects in the domestic as well as international markets," Stanton says.

In a press conference, Lindner said that the firm was unable to gather enough working capital to continue. The 7-year-old firm had secured three rounds of venture capital financing from 13 investors in previous years. But in recent months, the original backers refused to support the company financially. Meanwhile, the firm was unable to attract new investors, according to Stanton. She says that because of the recent demise of various microcomputer firms, the venture capital community is tending not to invest in technology companies.

In its seven years, Otron was never profitable. The firm had produced three machines besides the Otron 2001: the \$2,995 Otron Attache portable; the \$3,495 Attache 8:16, an IBM PC compatible with dual processors; and another version of the Attache 8:16 designed with standards set by the U.S. Department of Defense for military purposes. None of the products was very successful.

But things seemed to be looking up for

**Osborne ships:** Paperback Software, Adam Osborne's most recent foray into the industry, has shipped its first product in October as promised. My ABCs is an educational game for preschool children ages 3 to 6, available through all B. Dalton and some Waldenbooks bookstores for \$19.95.

Scheduled to ship in mid-October, according to Osborne, was the company's second product, called Executive Writer. He calls it a "Wang-type" word processor that sells for \$69.95.

Osborne says his Berkeley, California, firm will ship three more products in



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November. One is a lower end word processor called Paperback Writer. Another is Numberworks, a spreadsheet with virtual memory. The last is a paint-in-color program called Draw It. All will sell for less than \$50.

**New program produces braille print-outs:** A braille translation program introduced by Computer Aids Corp. converts a standard text file into a second file that drives a special braille printer.

The program, which does all the coding and formatting, is available for Apple and IBM computers. Braille-Talk supports a variety of voice synthesizers that allow voicing of menus and keyboard characters.

**Disk backup faster than streaming tape:** A new disk backup program from InfoTool creates a database of backup information and simplifies its retrieval.

The company claims that Bakup will back up a hard disk in less than 30 minutes, much less time than it takes for a streaming tape drive to do the same. Bakup also copies changed files and supports several restoration choices, according to the Santa Clara, California, firm.

Bakup runs on IBM PC XT's and compatibles. InfoTool says the program is less expensive than streaming tape drives, some of which cost up to \$2,295. Bakup sells for \$149.95 and comes with a 30-day, money-back guarantee.

**This one's strictly for secretaries:** Wang Laboratories has introduced the Wang Office Assistant, a typewriter, advanced word processor, and personal computer designed especially for secretaries.

The Office Assistant was designed to be able to perform a new task before completing the first. It allows a secretary to move from one task to another in two keystrokes. The Office Assistant sells for \$2,395.

**New IBM PC-compatible workstations:** Tandem Computers of Cupertino, California, has introduced the Dynamite, a stand-alone, multifunction personal computer workstation for its minicomputer line. The Dynamite runs MS-DOS software and includes a 360K floppy disk drive with 256K of random-access memory. The Dynamite sells for \$2,995. An optional hard disk is available.

Tandem has also introduced two new software products that translate data stored on the company's fault-tolerant minicomputer systems into formats that can be used by personal computer software packages that use MS-DOS.

Carol Ranalli

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So all of a sudden **Ted Koppel** is Mr. Electronics? Koppel, anchor of ABC-TV's "Nightline" program, seems to have decided that micros are worthy of his attention and is burrowing his way into the hearts and minds of industry folk with alacrity.

First we found out he was a "keynote speaker" at the prestigious Texas Lyceum Conference in September, talking about the emergence of high technology in Texas. Next we find him slated to moderate the Softcon '85 keynote panel discussion in March. Topic: "The Future of Software." Koppel's copanelists: the outspoken likes of **Mitch Kapor** of Lotus Development Corp., industry analyst **Esther Dyson**, and **John Sculley** of Apple. Presumably, Softcon officials decided they needed a household name to liven up such a "dull" group.

Or maybe Koppel's trying to get a job with **Regis McKenna**.

Worshippers of the Electronic Thumb are in luck. Infocom, the company that put the *I* in interactive fiction (so to speak) has converted *The Hitchhiker's Guide to the Galaxy*, from the zany BBC radio serial and TV show and popular book of the same name(s), onto disk.

**Douglas Adams**, who wrote the original 1978 radio drama, cowrote the game with Infocom's **Steve Meretzky** of Planetfall and Sorcerer fame. It was Adams' idea to transform the book into interactive fiction, and the duo did extensive research on the topic "throughout the



*Ted Koppel: From talking head to keynote speaker, he determinedly wriggles into the wonderful world of microcomputers.*

galaxy" or, the documentation admits, "in English pubs, anyway."

For some reason, documentation in the goofy packaging keeps telling us not to forget our towels, necessary equipment for this Cosmic Hitch. We're just a little nervous about booting the disk.

Boy, the prose in this industry is getting purpler and purpler all the time. The latest to cross our desk is for a recent release from Datamost, a game by **Roger Webster** and **Dan'l Leviton**, called *Earthly Delights*. We thought it had to be great if it inspires this kind of creative writing from its support team:

"A salubrious introduction" to the interactive fiction genre, "*Earthly Delights* is a game for people who like Alfred Hitchcock movies, heroes who win by their wits, and villains who are neither Satan incarnate nor post-Freudian bedwetters. . . . You don't have to live up or down to some 'role' like Brassfyst the Mighty." Et cetera.

**Gary Koffler**, director of software and talent for Datamost, had a hard time tracking down the press release's author for us. "No one wanted to



*Adams, left, wrote original Hitchhiker's Guide; he and Meretzky take a pub break for a quick photo session.*

admit to writing it," Koffler says.

It turned out to be Leviton himself.

Truly purple prose, however, could only be about a computer that helps "everyone discover a good deal more about himself through [interpreting] the mystery of color." The product, called (what else but) Colorscope, is "right on target for today's entrepreneurs who are seeking a unique business opportunity with high profit potential," especially if they have \$15,900 burning a hole in their pockets.

Martin Stuart of Computer Amusement Systems in New York says Colorscope is for "the kind of people who like horoscopes" and is perfectly suited for shopping malls, fairs, trade shows, conventions, exhibitions, amusement parks, tourist attractions, and fund-raising events.



*Colorscope in action*

But we have a sneaking suspicion it's really Amiga's marketing department using a devious method to find out if people are going to like its still-secret, whiz-bang, "Mac-alike" color computer.



*Koffler: "You called for that?"*

You've heard of Kitchen Sinkware. Stay tuned for Media Saturationware, as **Rupert Murdoch** — the filthy-rich Australian media magnate who owns the *New York Post* and the *Times of London*, just to mention two — enters the magnetic media of software.

No doubt smarting from his unsuccessful attempt to

take over Warner Communications earlier this year, Murdoch's News Ltd. company is now one-third partner of Computer Power Holdings, Australia's largest software and systems house.

*Denise Caruso*

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MICROS OVERSEAS

# COMPUTING INSIDE THE USSR

*The Soviets slowly begin to permit use of personal computers*



Richard C. Hall

*Inside the Soviet Union, leaders are establishing policies to permit — and control — use of personal computers beyond defense applications.*

**BY DAVID NEEDLE  
AND ALEXANDER BESHER**  
*InfoWorld Staff*

In a country where individuals can't even use a photocopier without a permit, it is hard to imagine widespread use of personal computers. But recent events point to the Soviet Union's modest participation in the personal computer revolution.

"There were no personal computers at all in Russia when I was there three years ago," says Alex Tatarinov, who worked as a programmer in the Soviet Union. "I was working on a computer equivalent to the [mainframe] IBM 360 and we also had a type of minicomputer similar to the DEC PDP-11."

In August, the Coordinating Committee for Multilateral Export Controls, an

export-screening panel run by the United States, Japan, and 13 member nations of NATO, significantly relaxed guidelines on exports of some older models of personal computers to Eastern Bloc countries. Restrictions on such models as the Apple II and Atari 800 were loosened, while rules governing larger systems were tightened.

In September, the Soviets announced they had begun a 15-year program to teach students to use Soviet-made personal computers called Agats.

Still, Tatarinov and other Soviet Union watchers see some inherent philosophical and technological problems in trying to introduce personal computers into Soviet society.

"The government wants to be sure everything is under its control," Tatarinov says. "Communication over phone lines

would be a restriction because communication lines aren't developed in Russia. Most people don't have a phone or a chance to have one."

The Soviet Union's primary application of high technology is in sophisticated military and defense systems. While Agats are being introduced in a few Soviet schools, personal computers are likely to remain a mystery to most Soviet citizens.

"I would say that when the average Russian citizen thinks of things to buy, computers would not be at the top of his list," says Lynn Gallup, former general manager of the East/West technical strategy computer systems group for Control Data Corp. "Their culture of the common man is too far behind us, technologically speaking, for there to be interest." Gallup is now a trade consultant for Control Data.

"The Russian form of government

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jealously guards anything that can be construed as information — which is power," Gallup says. "Personal computers would fall into this category; database programs used to search for and sort information are a form of power."

Video games are available on an extremely limited — and expensive — basis, according to one Soviet expatriate now living in Brooklyn, New York. "Some stores were just starting to sell game machines like the Atari [2600 game system] when I left three years ago," says David Dityla, who worked as a mechanical engineer in Kishinev, the capital of the Republic of Moldavia.

The video game machines were expensive (about \$800) and sold in only a few select stores, and only three or four game cartridges were available to play on them, according to Dityla.

"There were no personal computers when I was there," Dityla says. "Maybe

believe that the use of personal computers there is inevitable.

"I think computers will come to the Soviet Union, but the government will severely limit access to them," says Richard Saul, who teaches international relations at Boston University. Saul took a group of students to the Soviet Union last year. "We can buy modems and access information services," he says. "That would never happen in the Soviet

## **Personal computers are likely to remain a mystery to most Soviet citizens.**

they have [micros] now, but I had friends who were high level managers and programmers and they didn't use micros. They all used big computers."

Some Soviet Union experts, however,

Union."

The kind of controlled data processing described by Dityla (computer terminals tied to large mini and mainframe systems) will likely remain the state of the art, or

## **SOVIETS INTRODUCE KGBjr**

**H**ow would the Western microcomputer industry react if the Soviets were to market personal computers? Here's one scenario:

It was caviar, sturgeon, and vodka at the KGB hospitality suite at the Hotel Rossia to celebrate the first international computer show held in the Soviet Union (Moscow Comdex '85). The feast also celebrated the launching of the KGB's first venture into the home computer market with the introduction of the KGBjr, a perky little 128K machine (expandable to 512K) with infraRed keyboard.

Other Soviet entries into the personal computer market announced at the gala affair included the Commiepaq, a transportable computer (can be lugged from the ministry to the dacha easily), a kneetop Red Shack Model 100 with built-in modem (comes with a one-year subscription to ComradeServe, the Soviet Union's propaganda utility), and a full line of software products — among them Gulag 1-2-3, a spreadsheet designed for state security purposes, the Cyrillicstar word processing program, and an underground hit at the show, a Soviet version of Flight Simulator with special sectors featuring



Would IBM and Apple welcome the Soviets into the personal computer marketplace?

the Finnish border and the Berlin Wall. A beaming Soviet president Konstantin Chernenko opened the Comdex proceedings, although some Western industry analysts speculated that the president actually might have been a Chernenko clone.

The keynote speaker from the United States was a high ranking representative from IBM's Entry Systems Division. He welcomed the Soviets into the personal

computer marketplace, saying their entry legitimizes the worldwide computer market, and predicted that the new buzzword to arise from the freer exchange of information technologies between East and West would be *detenteware*.

Reportedly IBM and the Soviet government are negotiating joint production of a sophisticated new 32-bit personal computer to be sold in Eastern Bloc nations. It has been code-named "Kasha."

Also attending Moscow Comdex '85 was an ebullient Jack Tramiel, owner of Atari until he recently sold the company to the KGB for a reported 150 million rubles.

The Atari Creditors Task Force, based in Sunnyvale, California, has asked the U.S. government to introduce an emergency resolution in the United Nations asking the Soviet Union to assume Atari's accounts payable in good faith.

The press officer at the KGB's Home Computers Division would say nothing except that the KGB planned to remove Alan Alda as company spokesperson and replace him with the Bolshoi Ballet.

*Alexander Besher*

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the only option, for most Soviet computerists.

But the Soviets aren't ignoring personal computers. The country has begun manufacturing 16 models of personal computers. The Agat, one such machine, is apparently a clone of the Apple II.

Currently, Soviet schools provide no computer training. But starting next year, schools will receive 1,131 Agats as the start of a five-year plan to teach computer use in schools, according to an article in *Teacher's Gazette*, a Soviet magazine distributed in Moscow. Initially, ninth-graders will get computer instruction. Eventually, the lessons will begin in fifth grade.

By the year 2000, 1 million Soviet students each year will be learning how to use computers.

This "15-year plan" seems staggeringly conservative compared to the rapid influx of personal computers into U.S. public schools during the past few years and the attendant generation of U.S. computer whiz kids. But it's hard to compare the priorities of the Soviet government and its people with a consumer-conscious, cash rich, competitive American society.

"The difference is the Soviet Union is an agrarian economy with 75 percent of its gross national product in food, while ours is 75 percent in white-collar office work," says Charles P. Lecht, a high technology consultant and writer who has testified before congressional committees on the relative technological strengths of Eastern and Western countries.

"I don't think there is any shortage of brains in the Soviet Union," Lecht says. "But how are you going to give an IBM PC AT to a guy pulling his plow with a horse?" When the Soviets need micros, they will make them, Lecht says.

Were it not for the Soviet invasion of Afghanistan in 1979 and the subsequent U.S.-imposed trade embargo against the Soviets, the latter might be a lot further along in distribution and application of computer technology for nonmilitary uses.

Control Data had supplied mini and mainframe computer systems for nonmilitary applications to the Soviet Union until then-president Jimmy Carter imposed a trade embargo after the invasion. Control Data's biggest customer was the Soviet Ministry of Geology, which used the computers to aid in such ventures as oil exploration, according to Gallup.

"Without the embargo — and I'm not saying it shouldn't have been done — Control Data would be doing a whale of a business right now [selling computers] in the Soviet Union."

The firm was ready to make several big sales of its Plato educational computer system to the Soviets when the embargo

went into effect. "We were talking about our Plato system and they were very interested," Gallup recalls.

"We had sales close to coming about. Based on the interest they showed, they had sincere need for the equipment," she says.

The Plato system consisted of a specially designed networked computer system that relied on Control Data's own educational courseware and terminals that

## *When the Soviets need micros, they will make them, Lecht says.*

had some local processing capabilities.

The system was designed to provide vocational training courses and other job-related, computer-based instruction to the Soviets. (Control Data has since expanded and enhanced the Plato system into an online network of services stored in a mainframe that can be accessed by personal computers equipped with modems and the firm's software.)

Since the Coordinating Committee's move was announced, the U.S. Department of Commerce has relaxed controls on computer exports in response to pressure from some 250 U.S. computer companies.

The plan now is to rely instead on self-policing by U.S. companies to ensure that high-tech products with possible military applications are not rerouted to the Soviet Union via middleman firms in the Far East and Europe. The heart of the problem is the U.S. government's allocation of distribution licenses to companies that export products. These licenses permit companies to ship to multiple destinations under a single permit.

In January, the U.S. government attempted to impose measures that would require a permit for each destination, resulting in increased red tape and shipping delays. Additionally, the United States wanted foreign companies on the receiving end to provide the Commerce Department with lists of their clients, something foreign distributors were loath to do. They feared that if U.S. companies got such lists, the latter could then market their products directly.

Since the Commerce Department backed down and export restrictions were relaxed, it has never been easier for the Soviet Union to acquire what was formerly the forbidden fruit of personal computer technology. □

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**An evening with Enable:** The Software Group has extended a special invitation to IBM PC users groups nationwide. It is offering to show these groups its new integrated package, Enable, for free and without obligation.

One of the group's representatives will demonstrate the system at your users group meeting and conduct a question-and-answer session. Your group will get a free copy of Enable for evaluation and review. The company is offering a discount to IBM Personal Computer clubs: up to 25 copies of Enable for \$300 each. (Enable is a \$695 value, according to The Software Group.)

To book your demonstration, call The Software Group's customer service department at (800) 932-0233, (800) 338-4646 in New York state.

**Keeping pace:** *Microcomputing Periodicals: An Annotated Directory* lists 843 microcomputer-specific magazines, newspapers, and newsletters currently in print. George Shirinian, a librarian interested in microcomputers, got the idea for this book about two years ago.

"Because the market is so volatile, the

book is produced in small — and uneconomical — print runs so that it sells out quickly," he says.

The directory, now in its 10th edition, contains title, address, frequency, starting date, cost, and a brief, one-paragraph annotation for each publication. Also included is an appendix of out-of-print publications and those with new names.

The directory costs \$19.95 in North America (including shipping) and \$21.95 elsewhere. To keep pace with the start-up and demise of microcomputer-related publications, write to Microcomputing Periodicals, 53 Fraserwood Ave., No. 2, Toronto, Canada M6B 2N6.

**Where it's At:** That's the name for the First Attache/2001 User Group's bi-monthly newsletter. On weekends, the group operates a bulletin board system, AttNet, which can be reached at (505) 897-0247. Members also get together once a year in New York for a national meeting.

Included in the \$35 membership fee is a free disk of public domain software that members can copy and distribute to others. If this is where it's at for you, write to the First Attache/2001 User Group's editorial offices, P.O. Box 2315, Corrales, NM 87048.

## EVENTS

**November 8-9, New York, NY:** The First Micro Inves/Tech conference and exposition will feature more than 200 financial and investment software systems and databases, workshops, and seminars. The event is sponsored by Executive Enterprises Inc. and the *Financial and Investment Software Review*. Contact: Adrienne Cannella, (212) 489-2696. Location: New York Penta Hotel. Admission: \$15 exhibits, \$395 conference.

**November 8-10, San Jose, CA:** "Computers as Knowledge Delivery Systems: The Changing Face of Education" will be the theme of EdCompCon-84. Sessions will address the business, industry, and academic communities. Contact: David C. Rine, (309) 298-1315 or (309) 298-1452 (messages). Location: San Jose Convention Center. Admission: \$65 students, \$120 IEEE members.

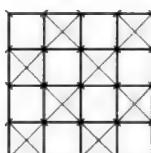
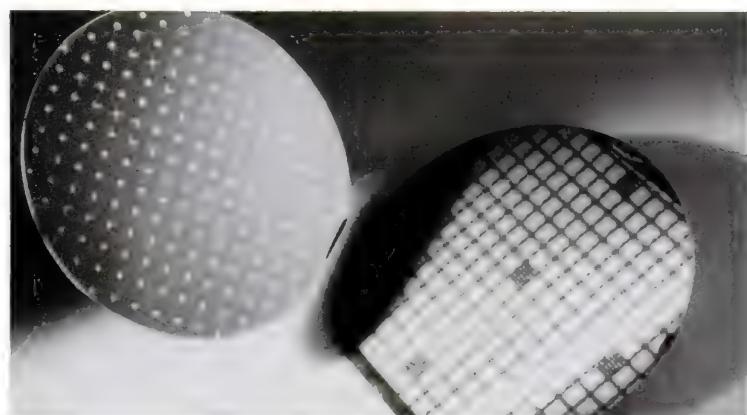
Barbara Gerk

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The network offers planning and programming tips, algorithms, job placement and references, a computing resource guide, and electronic mail. Inside information on Apple's Macintosh is also available on disk templates for \$39 a copy.

It costs \$75 a year to subscribe to the network. There is also a \$15 monthly charge. The system can be accessed from anywhere through Tymnet at \$3 per hour for 300 or 1,200 baud. Send your name, address, background, and two favorite languages to John T. Draper's Programming Network, 182 Caldecott Lane, No. 126, Oakland, CA 94618 or call (415) 540-7058.

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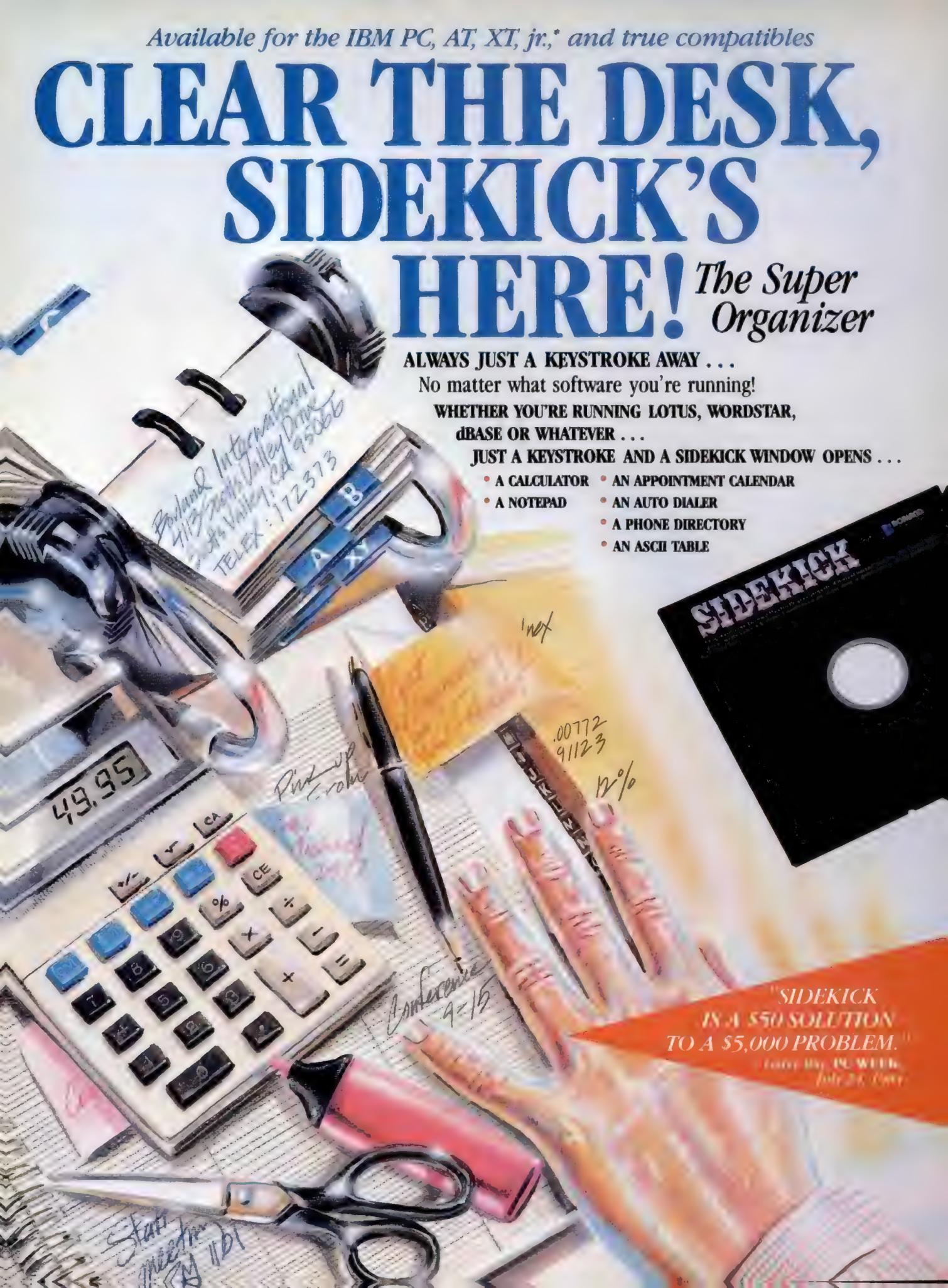
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Here's Sidekick in action. That's Lotus 1-2-3 running underneath. In the Sidekick Notepad you can see data that's been imported from the Lotus screen. On the upper right, that's the Sidekick Calculator.

| SALES                | 1990/91            | \$440.00        | \$48        |     |
|----------------------|--------------------|-----------------|-------------|-----|
| Royalties            | 555.00             | \$68.50         | \$6         |     |
| Other                | \$15.00            | \$16.50         | \$1         |     |
| <b>TOTAL REVENUE</b> | <b>\$470.00</b>    | <b>\$517.00</b> | <b>\$56</b> |     |
| <b>EXPENSES</b>      |                    |                 |             |     |
| Cost of Materials    | \$20.00            | \$22.00         | \$2         |     |
| Rent                 | \$5.00             | \$5.50          | \$5         |     |
| Advertising          | \$45.00            | \$49.50         | \$5         |     |
| Salaries             |                    |                 |             |     |
| Total Expenses       | 11:39:23 9/14/1994 | \$20.00         | \$24.20     | \$2 |
| Profit before TAX    | Cost of Materials  | \$22.00         | \$24.20     | \$2 |
|                      | Rent               | \$5.50          | \$6.05      | \$5 |
|                      | Advertising        | \$49.50         | \$54.45     | \$5 |
|                      | Salaries           | \$35.00         | \$38.50     | \$5 |
| <b>Net Profit</b>    |                    |                 |             |     |

12-13-new file 14-import data 15-expand 16-contract 17-select

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ARTIFICIAL INTELLIGENCE

# CAN NATURAL LANGUAGE SELL?

*Microrim the latest to try with a 'universal' version of Clout*

BY SCOTT MACE

*Senior Writer*

**S**peaking to a computer can resemble speaking in tongues: The machine understands the arcane words and symbols, but the uttering human is likely confused by it all. Why don't computers understand forms of communication more natural to people, such as the user's natural language?

In some cases, they do. Innovations like spreadsheets — which let operators give computers financial information in a commonly accepted form — have sprung forth from development labs into full and immediate acceptance by users. But natural language recognition hasn't caught on, even though it seems an obvious solution to the problem of communicating with computers.

Though this branch of artificial intelligence gives the user the ability to type commands to a computer in a vernacular, such as American English, companies that have tried to market it thus far have reached for the brass ring in vain.

This month, Microrim, the Bellevue, Washington, publisher of the R:Base series of database managers, will launch a new assault into the natural language market. It plans to introduce a new version of its natural language product, named Clout, which was released early this year and has been sold only in conjunction with the R:Base line. What makes this version significant is that, for the first time, users of numerous popular business packages will be able to type in questions and get back results, all in everyday language.

The product, Clout 2, will bring the function of the original Clout to many more programs on IBM PC-style computers. It will apply natural language techniques to information prepared and stored by Lotus Development Corp.'s 1-2-3, Ashton-Tate's

Dbase II, Software Publishing's PFS File, Software Arts' Visicalc, and Microsoft's Multiplan. The program also accepts standard ASCII text files from any source — including mainframe systems.

What at first appears to be an intriguing way to easily get data out of

these different files may prove far more important as an analytical tool. Natural language commands and file handling capabilities in Clout 2 let users compare data in ways they never could before, claims Wayne J. Erickson, chairman and chief executive officer of the 3-year-old company.

Erickson's firm is hardly bringing a startlingly new technology to the computer world. Natural language technology is an offshoot of artificial intelligence research conducted over the last 20 years. In that time three primary uses have emerged. Academicians have created programming languages that resemble English more than they do computerese. The problem with such languages, usually programmed on mainframes, is that they require huge electronic dictionaries to resolve the grammar and syntax problems created by irregular, ambiguous languages such as English.

Natural language technology is also used in expert systems, which are built on the notion of taking a specialist's knowledge and build-



*Former Boeing employee Geoffrey von Limbach was hired by Microrim's chairman to write a natural language for personal computers.*

MICHAEL CARR/PACIFIC HORIZONS

**'We started  
talking about  
natural language,  
and I got to  
thinking about  
database query.'**

ing a "black box" to disseminate that knowledge via computer. And natural language systems such as Clout have also made inroads as a way of asking sophisticated questions of databases using plain English commands.

Such products have, until now, been at best modestly successful. (See story on page 40.) Erickson

and Microrim are betting that they can make natural language recognition the next essential piece of software for the business desktop.

Microrim will have to do some fast talking and fast stepping to do it. Many buyers are already jaded by marketing claims of "artificial intelligence" for nearly anything on computers. And the original Clout has already faced the same problem many other natural language systems have: It runs only with the company's own proprietary database manager. Although sales of R:Base's various versions — 2000, 4000, and 6000 — have not been insignificant, they pale in comparison to the installed base of industry leaders such as Dbase II and 1-2-3.

"R:Base doesn't really have that much of a market penetration," says Dan Spiner, chief executive officer of Management Information Software of New York. The company resells hundreds of software titles to Fortune 500 companies, insurance companies, and banking institutions.

"Typically, in a large corporation, information is very critical and executives don't really have time to learn inquiry into a database; they don't have any time to learn the syntax," Spiner says. "The nice thing that Clout does is it allows a senior executive or a manager to waste his time

on making inquiries into the database rather than learning how to spell correctly

## *After conversion, 1-2-3 users start building their dictionaries just as R:Base users do.*

or to have the correct syntax."

Spiner is also a recipient of an advance copy of Clout 2 from Microrim and says the product could have a major impact in corporations. "Now Clout is available for everybody who has a program already and wants a little easier access to his data," he says. He is disappointed, though, that the program doesn't work directly with files created by Ashton-Tate's newer Dbase III program, which may dis-

place the older Dbase II.

According to Erickson, senior managers in companies are looking for ways to compare business plans, which might have been created with 1-2-3, to results, which could be stored as an ASCII file in some accounting package.

Erickson says. "That really allows people to do analysis that was virtually impossible for them to do before, unless they were going to just write reams and volumes of code and extraction programs."

But will people buy it? Programs billed as having artificial intelligence often succeed only in confusing the buying public, since even experts can't decide what AI really is. "Unfortunately, artificial intelligence, as I'm sure we all know, is becoming a buzzword that's being misused in many ways," Erickson says.

Consequently, Microrim won't use the terms *artificial intelligence* or even *natural language* in advertising Clout 2, says Kenneth Scott, senior vice president of marketing.

"In one of the focus groups [used to test Clout 2], we started talking about natural language," Scott says. "I had a Lotus user there, and he slammed his fist on the table and

he said, 'Lotus is natural language.' So in the advertising, we don't talk about AI, we talk about 'words of your own choosing.' People are confused about the topic. They view it as a smokescreen. They don't know what they're going to buy if they buy artificial intelligence, so that's not what we're going to sell."

In truth, natural language processing is so open-ended, so flexible, and yet so powerful that it defies simple description. Examples of natural language programs say more than technical descriptions.

"We've got people using this product who have put wallpaper inventories into it," says Scott. "[They] put in colors and sizes and all that kind of stuff. We've got another company that has put personnel on it — personnel policies, listing of personnel with their phone numbers and departments, and so forth."

"It's fully expected that people who are, pardon the phrase, computer illiterate should be able to still use this particular technology, and they do."

Clout, as much as the company's database products, is the phenomenon



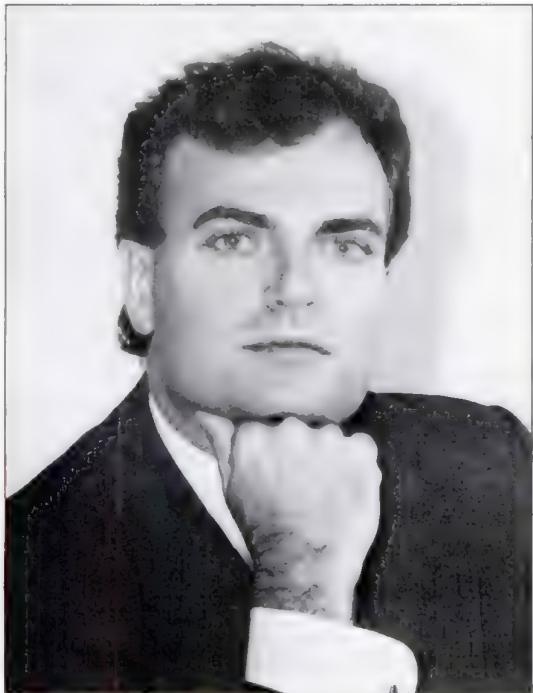
MICHAEL CARR/PACIFIC HORIZONS

*Colin Miller is project manager for Clout 2 and developer of File Gateway.*

## *'In large corporations, executives don't have time to learn syntax.'*

Clout 2's File Gateway program can pull pieces of data in from the different sources to an environment that Clout understands.

"Then, using natural language, people can ask questions, compare actual sales vs. planned sales, ranked by state or whatever,"



*Dan Spiner is CEO of Management Information Software, which resells hundreds of titles to Fortune 500 companies.*

## TRANSLATING DATA: THE GATEWAY TO NATURAL LANGUAGE

The File Gateway program of Clout 2 is the key to the program's capability to get at information from Lotus' 1-2-3, Dbase II, and PFS File with natural language questions posed by users. Before the questions can be asked, though, the information has to be changed from its native form into one that Clout can understand.

The menu-driven File Gateway program works not only with files from those programs but also with DIF files created by Visicalc or other programs, SYLK files created by Microsoft's Multiplan, or ASCII files that have been transferred to PC-DOS or MS-DOS computers, either by disk or through a micro-mainframe link. It is the addition of that program to the original Clout that has extended its usefulness beyond the Microrim product line.

But the program does not provide a perfect translation. Once a user has moved files into Clout form, more work may be needed.

Indeed, in many cases, users may have to modify and add their own labels to the information before inquiries can be processed, even though the information is labeled in its native state. The problem crops up with information stored and transmitted in ASCII format; File Gateway just can't distinguish the labels.

On the other hand, some files come into the Clout environment complete with identifying information. The labels for rows and columns of a Lotus spreadsheet are retained by the File Gateway program and can become part of the Clout vocabulary, allowing users to ask questions such as: "Which warehouse shipped more product than planned last month?" or "Which salespeople were above quota last month?"

"We try to capture as much information as we can," says Colin Miller, project manager for Clout 2 and developer of the Gateway program. As the program reads in rows and columns, it also displays sample values so users can double-check that they're capturing the proper data.

The ASCII problem may be more pervasive than either Microrim or its customers might like: Miller says "a fairly

large percentage" of files — perhaps as much as 80 percent — are likely to be plain ASCII. The relief is that, once the file is converted into Clout format and the data named, users can save the information so that they can read in new data

That is what creates the opportunity for detailed analysis of data from different sources.

Because users can start with simple, small dictionaries and progress to complex analysis systems, the product appeals to novices and experts, Erickson says. Users won't outgrow its capabilities in two days, nor will it take them two years to become comfortable with it.

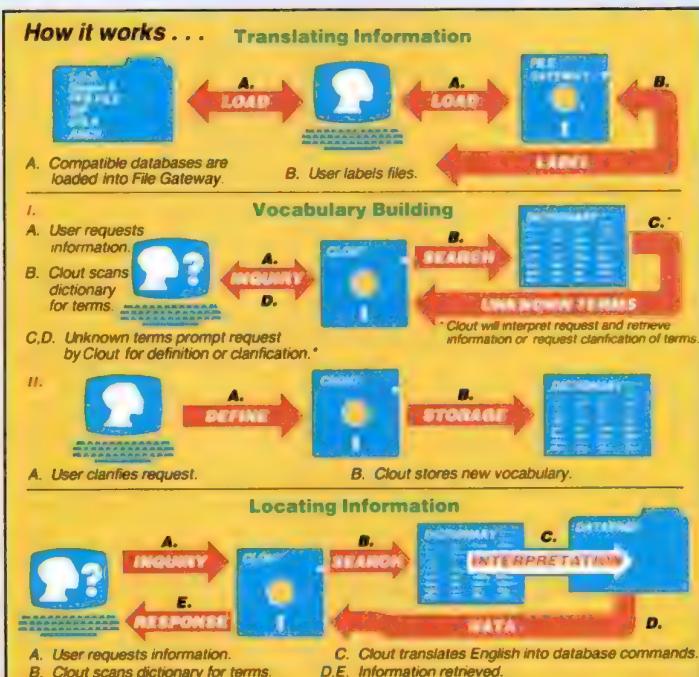
In Excalibur Technologies' Savvy, there is little distinction between the programming language and the query language in the database. A typical command might be "Give me all of the shift supervisors who are in California whose last name is Jones who made more than \$5,000 a quarter last year." Then the user can make some complex statistical analysis beyond what is provided in most query systems, according to Excalibur's president, Jim Dowe. "Most query systems allow you to retrieve the data only, but not to do

any extensive manipulations of the data."

Thus, procedures in Savvy can include commands such as "Do an invoice." If Savvy has a limitation, it's the inability of the system to explain certain concepts, such as regression, short of the user's knowing the exact formula. "If you really want to do that thing, you ought to have a more efficient jargon," says Excalibur spokesperson Nelson Winkless.

Another company, Safeguard Business Systems of Fort Washington, Pennsylvania, has organized its natural language product as an accounts receivable system rather than a database. "It has been received very well," says vice president Don Alvin. In November, an accounts payable package will be added to the first module and sold for \$1,200; separately, the modules cost \$895.

The combination product, to be called the Cash Manager, is more expensive than its competitors, but Alvin claims that in tests his product runs about 30 percent faster and eliminates the usual need to go through several menus when posting financial transactions to a database. "We're not menu shopping," says Alvin; sales are posted directly to the database.



*File Gateway converts information into Clout format. Subsequent inquiries allow Clout's dictionary to understand a particular user's definitions.*

without having to recreate the form.

After conversion, users start building their dictionaries, using Clout just as R:Base users do, Miller says. The user gives instructions to access information and generate reports. Those instructions can be phrased in words of the user's choice, even slang. If the term or phrase is not already in Clout's vocabulary, Clout asks the user to define it.

Clout expands its vocabulary by remembering the synonyms it has learned, unless the user tells the program otherwise. New terms become a permanent part of the program until they are changed by a subsequent vocabulary definition.

Erickson says it's possible for natural language query software to read in data directly from applications such as 1-2-3, but the data isn't optimized for speed and versatility if it isn't stored in an R:Base fashion. "Someplace there has to be a common dictionary," he says.

More important, under Clout 2, users can have up to five files open for access by natural language query. Those files can be from different programs, such as 1-2-3, Dbase II, and a mainframe file.

that has propelled Microrim, a small, 100-employee firm, into the spotlight. Erickson wrote the original version of the company's relational R:Base database manager, as RIM, while he was a programmer at Boeing Computer Services Co. NASA used RIM in connection with space shuttle missions. At that time, Erickson says, the company was trying to figure out how to keep the shuttle's insulating outer tiles from falling off. Running on a Control Data mainframe, RIM told NASA and Rockwell engineers all about the thousands of different tiles used in the shuttle. In October 1982, Erickson received an award from NASA for that work.

Erickson started Microrim in November 1981 with the intent of selling a version of RIM for personal computers.

## 'Artificial intelligence is a buzzword that's being misused.'

From Boeing, he hired Geoffrey von Limbach and Michael Baylor, who would become Clout's authors. "We started talking about how you do natural language, and I got to thinking about natural language just as database query," says von Limbach.

As an analytical tool, Clout has been responsible for some innovative uses of computers that were derived from the program's capability to recognize patterns and simulate complex models. At Security Pacific Bank's headquarters in Los Angeles, executive intern Parris Thermonos used Clout to develop the sophisticated risk-analysis system that a top Security Pacific executive uses to decide which banks to do business with.



Wayne J. Erickson is chairman of Microrim, maker of Clout and the R:Base series.

Thermonos, a 1983 Stanford graduate, is in a special training program in which he acts as a sort of administrative assistant for a senior manager at Security Pacific. Although he developed the entire risk-analysis system, he had never used a personal computer until eight months ago. "Clout appealed to me because of the English language flexibility," Thermonos says.

The risk-analysis system contains five years of history for the top 100 banks in the country, with balance sheets and income statements. "When I first began the project, I just assumed that I would be

creating a Lotus kind of a worksheet so that this senior individual could then use the Clout English capability for extracting the information."

All Thermonos had at that point was raw data. He thought he would have to create hundreds of different kinds of ratios when analyzing all the different factors that determine the financial health of a bank. It turned out to be a lot easier than he thought.

"You don't have to go in and create a column, create a formula, and then roll the formula down for all things for all five years," Thermonos says. "You just put it in your dictionary, and all of a sudden you're able to use it to do '83 return on assets vs. '82 return on assets and look at any subset of that entire universe that you want based on those analytical measurements."

He says that the database he's using — which has now grown quite large — would be too large for his IBM PC to handle in the old fashion; the computer would be glutted with formulas. He says the application would be possible, but would have the capability to look at only 10 or 20 banks, rather than 100.

"Many of the individuals who have seen my model firsthand have gone back and ordered the product and are in the process now of learning it," he says. "This is a fairly recent development." He lays that development at the feet of natural language recognition.

"I think much of the interest currently fermenting in our organization is the anticipation that here's a tool for senior managers to look at their profit centers, their divisions, and their responsibility centers and in simple English ask, 'Hey, who are the winners this month? Who are the losers? What is so-and-so doing and why is he doing it? Who's ahead in this area?'"

Clout 2, which can accept Lotus files, promises to expand what Thermonos calls "the microcomputer revolution that's taken hold of our organization." According

Current Query Context:  
are there any poor performers  
rank them by salary

| NAME    | SALARY      | DEPT         | DEPT         |
|---------|-------------|--------------|--------------|
| LEE     | \$25,500.00 | \$243,000.00 | \$258,000.00 |
| ADAMS   | \$25,500.00 | \$198,000.00 | \$300,000.00 |
| ALLISON | \$27,000.00 | \$174,000.00 | \$280,000.00 |
| PERKINS | \$27,000.00 | \$155,000.00 | \$150,000.00 |
| CHU     | \$29,700.00 | \$235,000.00 | \$275,000.00 |
| LAYKIN  | \$29,000.00 | \$235,000.00 | \$225,000.00 |
| LAKE    | \$30,000.00 | \$195,000.00 | \$200,000.00 |
| BERRY   | \$31,000.00 | \$143,000.00 | \$150,000.00 |
| WALSH   | \$33,000.00 | \$147,000.00 | \$200,000.00 |
| BOSLEY  | \$38,000.00 | \$143,000.00 | \$200,000.00 |
| JAMES   | \$38,000.00 | \$176,000.00 | \$200,000.00 |

Enter query or (ESCI) to return to main menu.  
ID...

Using natural language, Clout users can call up information ranked in any number of ways.

Current Query Context:  
list the salespeople with salary greater than average  
which of these are in California  
are there any poor performers

Did not understand: poor performers  
Please enter a synonym or change spelling.  
E:salespeople with sales less than plan

Do you want to make this a permanent definition? (Y/N).....

Clout's vocabulary is expandable, using a dictionary to which owners can add new definitions.

to Thermonos, "Our organization has quite an investment of time in Lotus worksheets and Lotus formats, although we have individuals around who use Dbase II and whatnot. I think that will evoke interest in many individuals who have time committed to Lotus but haven't taken the time to learn R:Base to create a database with which they could use Clout."

It will also appeal to first-time users who didn't want to learn 1-2-3 in the first place, he says.

Inevitably, comparisons are made between Clout and Texas Instruments' Natural Link program, which also uses some natural language techniques. But the two programs are vastly different; Natural Link is primarily a series of menus that contain phrases, components of sentences that users put together either through the keyboard or through an optional speech unit. But the phrases in those menus must be created by programmers using a set of very complex rules and a large manual. Natural Link's vocabulary is not expandable by the user, unlike Clout's, which uses a dictionary to which owners can add new definitions.

"The TI product has limited applicability," Scott says. "It's geared toward one particular phenomenon. How Clout distinguishes itself is that the user is given the prerogative and the flexibility to develop his own vocabulary."

Natural language recognition has existed on mainframe computers for some years, but these systems rely largely on massive grammar dictionaries, sometimes containing up to 30,000 rules. Again, someone other than the user — often company information management specialists in charge of the corporate use of such programs — often defines the vocabulary.

"The user was not able to define vocabulary at his station at all," says Scott. "So while it was certainly easier to use than what he had previously experienced, it still wasn't his vocabulary. It was somebody else's interpretation of what his vocabulary ought to be."

Of all the obstacles natural language technology faces in the marketplace, dealer awareness and training have to be the biggest. Microrim is treading uncertain ground by pushing the technology largely at the retail level; other natural language products, such as Savvy by Excalibur Technologies of Albuquerque, New Mexico, are now being sold largely through direct sales.

Both Excalibur and Microrim are having success with "try before you buy" programs that let users see a demonstration of the software for themselves. Microrim sells a demo tutorial

## NATURAL LANGUAGE'S EARLIER ATTEMPTS

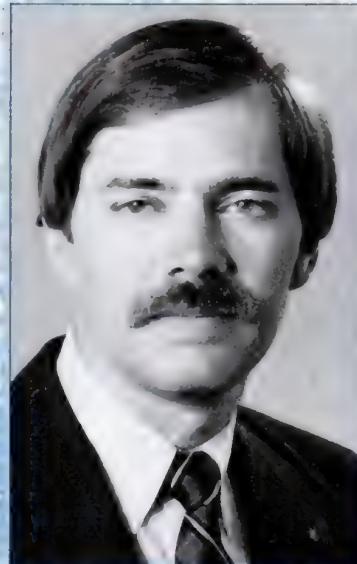
**S**ome early advertising for Clout claimed the natural language recognition system was the first and only such interactive language for microcomputers. "It was not a major portion of our introductory campaign for Clout," says Microrim's Wayne J. Erickson. "We had one brochure that was sent to dealers, in which the term 'first and only' was used."

Nevertheless, Excalibur Technologies of Albuquerque, New Mexico, maker of the Savvy natural programming language, took exception to the claim and sought an injunction against Microrim. Microrim sent a response to Excalibur but has yet to receive an answer. Both sides say the matter will fade away because Microrim no longer makes the claims.

Savvy and Clout do not, strictly speaking, compete with each other. One could sum up the differences between Savvy and Clout by saying that Clout strictly *retrieves* data using natural language, while Savvy can *create* and *change* information as well as retrieve it.

But being first hasn't necessarily given Savvy the inside track. Excalibur remains a smaller company than Microrim — in part because it doesn't sell the mainstream database managers that Microrim does.

Savvy is not an inquiry language, says Excalibur spokesperson Nelson Winkless. It is more accurately defined as a pattern recognition algorithm, closer to the heart



Erickson's Clout no longer claims to be the only natural language system.

of the artificial intelligence technology that spawned both Clout and Savvy. Part of the inspiration came from a book by Julian Jaynes called *The Origins of Consciousness and the Breakdown of the Bicameral Mind*. What is amazing about it is that the routine uses only 4K of memory, much less than expected, and does no parsing, breaking up of phrases into discrete parts of speech.

"It's a parlor trick," Winkless says. "We built an operating system around it. It's now running under PC-DOS."

In Akron, Indiana, Savvy is running the inventory system at John York and Associates, a family owned, 45-year-old hardwood reseller. Doug York, son of the owner, has used Savvy for about two years. York knew only dabs and dabs of computer programming language when he began building his Savvy program, which now takes up 1 megabyte on his IBM PC XT hard disk.

Natural language processing fits especially well with the hardwood business, York says. Though inventories talk about so many feet of maple, oak, cherry, and other hardwoods, the actual wood is stored in bundles of varying sizes, with nonstandard lengths of wood. In short, it's a nightmare for normal business software, which doesn't handle broken lots well.

But with Savvy, York asks questions of his inventory system, which the program then turns into sophisticated database sorts. "You do all of this in terms that we use in the industry," he says. Within minutes after a contractor calls him, York can determine, for instance, how much lumber he has to buy from mills to make 1,000 cabinets, as well as find the cheapest price and best grade of wood at the various mills listed in the Savvy database.

"I'm interested in preaching the gospel of computers to people in my industry," York says. "There's so much that could be done. Large compa-



Savvy is not an inquiry language but a pattern recognition algorithm, says Nelson Winkless of Excalibur.

nies are reaping the benefits of computers. Small- and medium-size operations are doing things in many ways like they did 30 or 40 years ago, not because it's right for their marketing but that's the way it's always been done. This will make them more competitive." When he perfects the system, he plans to sell it to other lumber middlemen.

In fact, Savvy's natural programming language is advanced enough to rival the expert systems now being developed for micros. But Excalibur faces the same problem that Microrim faced with the first version of Clout: how to sell a complete package into a market dominated by Lotus, Ashton-Tate, and Software Publishing.

As a partial answer, in November Excalibur will release Savvy Retriever, an add-on natural query language that will let Savvy tie into ASCII files running on machines using the PC-DOS operating system.

While Clout 2 costs \$249, the Savvy Retriever system costs \$595 — \$200 for the Retriever portion and \$395 for Savvy. But Winkless claims the system has far more power than Clout.

Whether that power will be an effective sales tool probably will depend on the nature of the buyer's business. Nervous corporate computer departments will probably choose Clout because the information is merely transmitted and observed, not changed. Free-wheeling smaller businesses and executives may prefer Savvy, because they are free from the worries of MIS department managers who have worked for years on ways to ensure the security and integrity of information in the corporate mainframe.

Texas Instruments continues to sell its Natural Link software, which also predates Clout, and in April TI announced

a programmer's tool to let developers use TI's natural language interface. Winkless implies that systems such as TI's sacrifice power. "If you make a system that is perfectly safe, it's also limited to do what the programmer thought of ahead of time," he says. But Winkless admits that a natural language system with too much flexibility can also get users into trouble, primarily because English and other natural languages often let users ask ambiguous questions.

Winkless believes natural language will be far more than the next software vogue. "We're going to get to natural language and, by God, stay there."

Like Clout, Savvy is intended to eliminate the jargon and the cryptic, esoteric commands that trip up many a user. "It isn't computerphobia that impedes a lot of us," Winkless says. "I think it's patronizing to keep saying that. It's distaste for the damn thing. Computers were invented by the only guys who could work them. They're programmed by them. All the descriptive language was generated by them. All in all, the thing is perfectly locked up so it's almost impossible for anybody from my side of the street — I'm a writer — to penetrate that system and use it. Well, we're up at the point now where it would be nice to be able to tap some of those other folks."

Like Clout, Savvy is also available in demonstration form, for \$9.95. The company's experience with dealers has been trying; few are willing to support a product not in the Top 10 these days. Recently, the company had a change of management. Jim Dowe, now chairman of Excalibur, says the company is putting more effort into a direct marketing campaign. And for now, as it is for the other products, word of mouth is a major marketing factor.

## *Clout and its brethren may be a step toward direct speech input.*

called *Unlock the Mystery*, which can be purchased via a toll-free telephone number for \$14.95. The demo covers both R:Base and Clout.

Being a relatively small company, Microrim has the double burden of letting people know about the new technology and about Microrim, all with a small advertising and promotion budget. It can't afford the millions of dollars Ashton-Tate and Lotus spent this year to advertise Framework and Symphony; then again, Microrim officials point out, the effectiveness of those ads, especially on television, is questionable.

Erickson also says that the time line involved in people's buying decisions for this kind of product is long. He says as much as a year may pass between the time people become aware of the product and the time they actually buy it. "They're going to visit computer stores and they're going to read computer books so they can make informed purchases. So we'll leverage our resources there." Dealer training for Clout 2, including Softsel's Softeach program, has already begun.

Also, for the first time, Microrim will advertise Clout separately from R:Base. In new Clout advertising, "R:Base is mentioned in passing, in the same way that Lotus' 1-2-3 is mentioned and the PFS series is mentioned and so forth," says Scott. "It works with popular programs such as those." But it's clearly Clout, not R:Base, that's being sold.

Clout technology is also a springboard for future products from the company. Company officials even imply that rather than tack on Clout to one application after another, it may become a standard part of computer operating systems, like recent products such as Borland International's Sidekick desktop manager.

For now, with natural language processing just taking off, Microrim and other companies will have their hands full just explaining what it is. Kenneth Scott says that Clout and its brethren are the beginning of a transition to direct speech input to control computer programs.

To which von Limbach adds that when voice-processing hardware for personal computers gets really good, the sky's the limit for turning common words into computing power. □



BRIAN WAISKE

*Excalibur's new chairman, Jim Dowe, is gearing the company toward direct marketing of Savvy. For now, word of mouth is a major marketing factor.*

*John Gantz*

# REPLACEMENT MARKET?



**M**y troops (both of them) and I here at Tech Street have recently had occasion to crawl about the rubble that passes for a personal computer market, in search of a new system. We want to augment the one we have, which, not surprisingly, is an IBM PC. Our applications: word processing, database, spreadsheet, and newsletter accounting, in that order, more or less. We have a bottleneck at the keyboard.

You might argue that a sample of one person is simply not statistically valid and that our observations ought to be tossed in the dumpster alongside those Gavilan press kits that came in briefcase-shape folders; the business plans from Dysan affiliates that are now mixing it up with yesterday's coffee grounds; the resumes on Eagle, MicroPro, VisiCorp, and other memorable letterheads; and the handful of champagne corks from the parties at Intel, IBM, Zenith, and 3Com.

But I tell you, there is a peculiar property to the life of Gantz that makes our sample valid.

Although I was born ahead of the great Baby Boom, I have found myself in the middle of all major demographic movements. When the draft rate was the highest during the Vietnam war, I got classified 1A. When I went off to hike the Appalachian Trail, so did all the other hippies-about-to-become-yuppies. When my wife, Shelley, and I got married, all the reception halls were booked. When we bought a house, so did everyone else. That drove up prices. When we bought our first stock, the market had peaked in volume and price as a result of a run of first-time investors.

So, as a representative of the median life, I submit that a single shopping

excursion for a single personal computer can be of momentous import, capable of foretelling cataclysmic change with no less certainty than the woolly coat on a single caterpillar can foretell a mini-Ice Age.

Our musings:

- **It's more of an upgrade market than you think.** At any one time, personal computer sales will be split between first-time users and those upgrading existing systems. If Future Computing's contention that home computer sales will rise only 10 percent this year over last is correct, there is some market research corroboration for the feeling that new users just aren't flocking to the stores. This automatically increases the percentage of buyers who are in an upgrade mood — which drastically changes the marketing dynamics.

- **Price is more important.** When you know what you want, as upgrade buyers do, acquisition becomes a matter of shopping around. This means that retailers — such as Entre and Businessland — that offer all sorts of support will have a tough time in the long run unless they can get ever more targeted in their applications help; i.e., they may have to evolve into vertical-industry systems houses.

- **Bundling gets in the way.** Retailers are trying to replace price competition by tossing in software packages. Although the list price of software available in some cases can exceed \$1,000, rarely is it the software you really want.

- **The agony of choice is replaced by the agony of timing.** The first time around, you face a wall of infinite choice. The second time around, the only question is whether to buy now or wait for the prices to drop, and whether to buy from ailing vendors. Around here, Columbia Data Systems has the best IBM PC clone price, but maybe Compaq will last longer. Visual Computer may have a great portable — but you can feel the earth getting ready to swallow that company. We are finding what data processing managers have known for years. It's not so much that prices drop but that capacity and features increase. Too bad. The Fujitsu Micro/16s may be a great machine, but we don't want to run — or pay for — multiple operating systems.

- **Copy-protected software makes you think twice.** Let's be honest. If you're going to use an IBM PC clone in the

next office, are you going to buy brand new software for it? You are if it's Lotus' 1-2-3 or Dbase III. You might not if it's Multimate or Wordstar. (We will, of course, now that we've written this column.)

- **Lap-size portables are still overpriced.** The new Data General/One may be the most ridiculous of the bunch — it can cost more than \$4,000 if you're looking for a printer and an interface box to handle media conversion to the IBM PC. The Hewlett-Packard 110 is better, but it's still up there. From talking to dealers, there seems to be some demand for these things from corporations making multiple buys — a regular consumer has to make an appointment just to see an HP — which must tell us something.

- **Local area networking is finally important.** We know, of course, that someday we'll wish we had bought a 12-station multiuser system for \$50,000. Meanwhile, we are trying to figure out how we can share the 30-megabyte disk attached to our mother system. Someday, we'll install a local area network — the simplest and cheapest we can find without too much shopping. We are stymied, though, by such mundane matters as how to run cables to desks in an open office plan. Do we drop them like pythons from the ceiling? What doesn't matter is whether we use baseband or broadband technology, whether the cable we snake is coaxial or twisted-pair, or whether our files move hither and yon in rings, stars, or loops. It matters not to us how many angels can sit on the head of a pin, only how much it costs per angel and what they'll do once they're there.

Beyond these specific ruminations are more general thumb-sucking contemplations.

Will the industry devolve into a playground for systems suppliers — the IBMs, Wangs, Sperrys, DECs, NCRs — that see the personal computer for what it has become: a distributed processing workstation and data terminal? Will Apple maintain the order rate for its Macintosh? Can anybody make money in the software business? Will the same companies that blew it entering the general purpose hardware or software market be better at offering products to vertical markets?

Maybe we'll find out when we buy our third computer. It won't be too long. □

*John Gantz is editor of the Tech Street Journal, a newsletter on the high-tech stock market and business performance.*

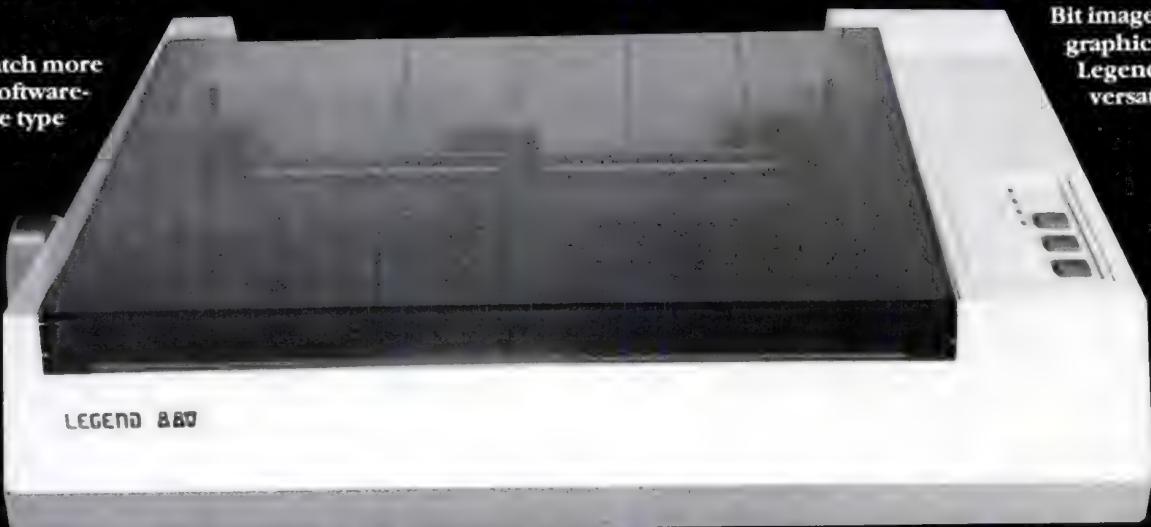
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## COMMUNICATIONS

# ELECTRONIC MAIL TAKES ON TELEX

## *But overseas telex monopolies resist computer invasion*

**BY DORAN HOWITT***Senior Writer*

The electronic mail industry, long frustrated in finding the key to successful mass marketing of its services to everyone who writes letters or uses a telephone, may have hit on one market that is ripe for the picking: the international telex business. The superiority of electronic mail over the 50-year-old telex system may seal the doom of telex.

"The question is whether there will continue to be a telex market at all," says Stephen A. Caswell, a principal of Trigon Systems Group of Toronto and editor of *Electronic Mail & Micro Systems*, a newsletter for the electronic mail industry. Many companies have posed the same question and are moving in for the kill from a variety of directions.

Western Union Corp., which probably has the most to lose of any U.S. company in the telex business, has made what may be the most ambitious commitment to the new electronic mail. It is staking a large part of its future on EasyLink, its new electronic mail and telex service. EasyLink lets a telex customer use a computer or terminal to send or receive telexes through a dial-up service. The system connects all EasyLink subscribers and telex users.

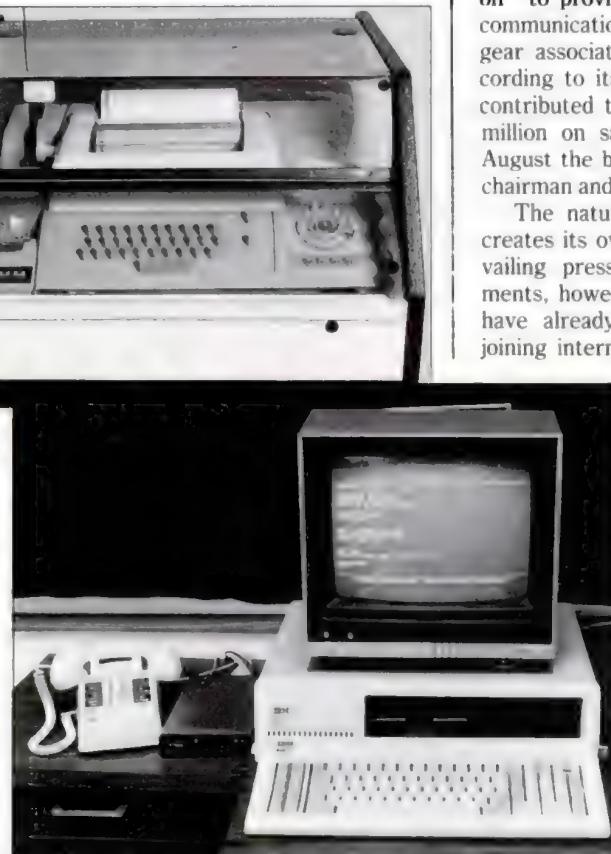
Started in 1982, EasyLink already has attracted about 100,000 subscribers, making it the biggest electronic mail vendor in the country, according to a spokesperson. Much of the EasyLink message traffic can flow over existing Western Union transmission lines, but the company has said it will spend \$70 million to expand the transmission network this year. It also will spend \$45 million, about a tenth of the company's annual revenues, to market EasyLink.

Western Union recently announced plans to deliver EasyLink-generated documents through DHL Worldwide Courier Express, starting next year. In the United States, this service will compete with MCI Mail, which last year started a similar service in cooperation with Purolator Courier. MCI Mail does not offer the service internationally, as the Western Union/DHL venture will. The Western Union service will also compete with

cablegrams (international telegrams), which are transmitted over telex networks. Western Union will guarantee U.S. delivery in two hours; international messages will be delivered the following day.

As a result of these communications wars, most experts see telex machines quickly fading from the scene in the United States, perhaps within the next five years. Overseas, the telex standard won't die without a fight.

"The way we get to telex in the United States will change, but telex overseas will



*Looking like a museum piece in its soundproof box, the clattering telex machine (top) is losing ground to silent, speedy electronic mail technology; here, an IBM PC with Hayes Smartmodem.*

be around for some time," says Caswell. Overseas, according to Caswell, the newer technologies will make slower progress against the huge existing international telex, which is sustained by a combination of inertia and politics — inertia on the part of the large base of users, and politics on the part of governments that profit from

state-owned telex services.

"In Europe, telex is a money-maker for the PTTs [post-telegraph-telephone monopolies]," says Walter Ulrich, an electronic mail consultant in Houston. "They're jealously guarding their volume."

Western Union's experience in the United States illustrates the costs for overseas government monopolies that might consider replacing existing systems with electronic mail services. Last year Western Union took a \$100 million write-off "to provide for a decline in value of communications terminals and switching gear associated with telex service," according to its annual report. The action contributed to a bottom-line loss of \$67 million on sales of \$1 billion, and this August the board of directors ousted the chairman and installed a new one.

The nature of the new technologies creates its own imperatives and countervailing pressures on reluctant governments, however. "Forty or 50 countries have already committed themselves to joining international, high speed, packet-switched networks," says Yaakov Elkon, president of Consortium Communications International of New York. Through the packet-switched data networks, overseas users can reach U.S.-based electronic mail services just as if they were in the States, albeit at a premium of 10 to 20 cents a minute. A customer in Germany, for example, could send telexes to the United States and exchange electronic mail with other EasyLink subscribers.

The prospect of potential profit has spurred some governments to try to outflank U.S. vendors by installing their own electronic mail networks. The postal services of Belgium, Norway, Saudi Arabia, Great Britain, and Canada, for example, all have bought licenses to operate a version of GTE's electronic mail system in their countries.

Most of these systems operate exclu-

sively inside one country. The services have their own computers installed and attach their systems to domestic telephone lines. Subscribers in one such country cannot exchange messages with, for example, American GTE Telemail subscribers; to do so they would have to subscribe separately to the U.S.-based system. For international communications, people in these countries still must turn to the telex network.

Most of the internal electronic mail systems do not offer a telex interface. That service remains in the hands of the old telex bureaucracies. Last year the Consultative Committee on International Telephone and Telegraph, a United Nations body, established a high speed telex standard called teletex. This is a point-to-point connection and does not include electronic mail features. It is being tried

out in several countries.

Incompatibilities among the many electronic mail systems may be another factor holding back their takeover of telex. "The electronic mail services all are shooting off in different directions. It could be a chaotic situation," says Elkon. But the Consultative Committee is expected to set a standard for linking the many electronic mail networks. This may encourage development of an international electronic mail network and break down parochial resistance to the changes.

Several countries already are following the American lead in liberalizing the telex marketplace. The United Kingdom has agreed to allow Western Union to market EasyLink in that country through a partially owned affiliate. Unlike purely internal electronic mail networks, this will be fully integrated with the U.S.-based EasyLink.

Belgium also has relaxed telex regulation and is allowing MCI to market its electronic mail in that country, as well as offer discount overseas telephone connections.

In less developed countries, telex will likely remain the dominant technology for another decade. "The infrastructure isn't there for electronic mail," says Ulrich. "Telex is in place and it will be resilient." He says that when using poor quality telephone lines, telex's 10 character-per-second rate is much more reliable than the 120 character rate coming into common use for electronic mail.

In the developed countries, however, the contest for a piece of the lucrative telex replacement market is heating up. Whoever comes out ahead in the race, the process seems likely to give a substantial boost to the worldwide growth of electronic mail. □

## A SHORT HISTORY

**T**elex, which dates back to the 1930s, is, in essence, an early, primitive, and — on an international scale — very successful electronic mail system. Overseas, because of poor telephone networks, language barriers, and time zone differences, telex and its cousin the telegram still thrive. According to Western Union, there are about 1.5 million telex subscribers worldwide.

But within the United States, telex has waned as an important means of business communication, yielding to a good and relatively inexpensive national telephone system and to a growing microcomputer telecommunications industry. As a result, the United States accounts for only a tenth of the world's telex subscribers.

Subscribers lease teletypewriters connected to special telephone lines and dial one another to transmit text, in 5-bit Baudot code, at the gentle pace of 10 characters per second. Telex machines are on and ready to receive incoming calls all the time, so the telex user never has to play "telephone tag."

Until a few years ago, telex service in the United States was a rigidly stratified, partially monopolistic industry. As a result of regulatory actions over the decades, Western Union acquired the sole right to transmit messages inside the country. It gained ownership of both networks: Telex I, which conforms to international standards, and the somewhat faster TWX or Telex II.

Thus, most U.S. telex users bought their service and hardware from Western Union. To transmit abroad, they sent messages through the Western Union lines to one of several international record carriers, such as RCA Global Communications and ITT World Communications, which own overseas transmission lines. (TWX signals, which are not compatible with international standards, are translated into telex signals by Western Union before being sent overseas.) The international record carriers were allowed to solicit customers directly, but this amounted to a small share of the market.

Within the country, prices were regulated by the Federal Communications Commission. Once a message reached the international record carrier, it was subject to a tariff set by international negotiations. When the message reached its destination, the local telex monopoly, owned by the government in almost every country, collected its fee for the final connection to the addressee.

In the late 1970s and early 1980s, a series of congressional and legislative actions opened the telephone and telex markets in the United States to competition. The international record carriers and Western Union invaded each other's turf, with Western Union quickly capturing 20 percent of the overseas traffic. Third-party players who had never been in the telex business entered the field. As a result, Americans now enjoy many options for conveying a telex message abroad.

Electronic mail vendors such as ITT Dialcom and GTE Telemail have set up links allowing their customers to transmit telex messages to and from the international record carriers via electronic mail. Those that haven't yet done so, such as General Electric's Quik-Comm, say they are working on it. Western Union joined the fray with EasyLink.

Several new companies have been started expressly to capture some of the international record carriers' overseas transmission business. For example, Consortium Communications International of New York was founded in 1978 to bypass the carriers and initially was known as a "pirate" carrier. It accepts telex messages through its dial-up electronic mail system and forwards them to its own computers in London or other locations via unregulated, high speed, packet-switched data networks. From there it gives the messages to the local telex network. By avoiding the international record carrier overseas tariffs, it can undercut international telex rates from the United States 20 percent to 40 percent.

While the international telex network is still reliable, its unwieldy punched paper tape technology — punched tape disappeared from computer rooms more than a decade ago — is woefully old-fashioned compared to the competition. Electronic mail costs less and offers numerous advantages: It operates five to 20 times faster, accommodates uppercase and lowercase characters (telex allows only uppercase), and permits access from any terminal, microcomputer, or communicating word processor and over any telephone line rather than requiring dedicated equipment and lines. Electronic mail services can store messages to be sent or retrieved at a later date and can send copies of the same message to different addresses. And while an overseas telex message can cost several dollars, the same message can be sent by electronic mail for pennies.

SOFTWARE COMPANIES

# Q&A: DAVE WINER

*'Our motto here is management by shipping'*

BY JIM BARTIMO

*Senior Writer*

Dave Winer, 29, is president of Living Videotext Inc. of Palo Alto, California, and developer of Think Tank, the first outlining program. Winer got the idea for Think Tank while he was a student at the University of Wisconsin. After working for VisiCorp (then Personal Software) as a programmer, he started his own company in 1981, naming it Living Videotext because he originally planned to market Think Tank as a telecommunications product. Think Tank is now available for the Apple II, Macintosh, and IBM PC.

**To what do you attribute Think Tank's success?**

Basically, I think we hit a nerve. There were a lot of people out there using different software packages to solve problems that Think Tank solved better. We found that a lot of people were using word processors and databases to organize their ideas. We presented Think Tank as an idea processor but found out later that more people were using it as a detail monitor.

There was a gap there that people in the industry didn't see. It's usually easier to sell a product to the industry than to users, but in this case it was easier to sell the product to users. The industry was so set on the five major categories of software that the idea of a sixth major category was almost revolting to it. When we persisted and pushed the product, it caught on.

**How did you feel when you found that Framework used an outline processor for its main structure?**

When Framework first came out, a lot of people said that our days were numbered and to look for another business. In fact, our product has been helped by the presence of Framework. We felt it was inevitable that there would be products coming out with some of the functionality of our product. If we weren't ready for competition, then we couldn't succeed even if the competition had never come.

You were one of the first firms out with a Macintosh version of its product. What do you think of the Mac and the new Fat Mac?



Dave Winer, president of Living Videotext Inc. and developer of Think Tank

In light of IBM's presence in the market, it is absolutely wonderful to have a strong machine such as the Macintosh for which to produce software. We basically have two legs in the marketplace right now with our Macintosh product line and our IBM PC and compatibles product line. The market absolutely needs an alternative to IBM, and the Macintosh is very nicely positioned to do that.

**Why has it taken so long for others to develop for the 128K Macintosh?**

It's a new technology. Today it's not difficult for us to write for the Macintosh. Our Macintosh people turn out as much code in a day as our IBM PC people do. It's like anything new. How fast did people adapt to automatic transmissions on cars? It didn't happen overnight. It's a new technology and it requires you to take a new look at it.

**Now that IBM has introduced system and application software, what do you think will happen to independent developers such as yourself?**

I think that independent developers are being repositioned by IBM. At least IBM is attempting to reposition us as providers of speciality software. IBM has given signals for a long time saying, "Stop making commodity products because we're going to come in and play that game."

I think the right reaction to this kind of move is for software companies to focus on innovation above all else. Invent a new product category and you'll probably find a

niche in the market and get the distribution that you need to become a success. But if you're trying a strategy that says, "I'm going to make a better word processor, database, spreadsheet, business graphics, communications, or outline processor," you're going to have a tough time.

**It seems like many developers are just waiting their turn to get the call from IBM. Will IBM just suck up others as it did the PFS line?**

I think a lot of people see that as the only way to survive. In a lot of cases, that's because the companies haven't positioned themselves as product category creators. If you categorize yourself as a product developer, it's probably not a bad alternative to have IBM package and distribute your product. But IBM is trying to buy creativity and innovation and entrepreneurship; it will probably find that a lot of the magic is going to go out of the companies it acquires.

**But if everybody sells out to IBM, doesn't the industry have itself to blame when only IBM is left?**

I think the whole industry does have itself to blame for IBM's incredible success. There was a period in 1981 to 1982 in which everyone was rushing to develop software for IBM computers. And I think a lot of people knew they were doing something dangerous, but there was a real lack of leadership in the industry at that time.

Apple wasn't doing much to support third-party software developments at the time and Apple was the best at it — Radio Shack wasn't doing anything to be a leader in the business. So IBM stepped into a leadership vacuum. The firm said, "Here's the standard. Make your software for this machine and you can be pretty sure that three or four years down the pike, it'll still be running on a hot machine."

**How does it feel to have made your first million dollars before you're 30?**

The only impact it's had on my life is that I drive a nicer car now. I have a BMW 318i, which I like. The most important thing to me is making products. Our motto here is "management by shipping." The day we stop living by that motto is the day the company will no longer interest me. □

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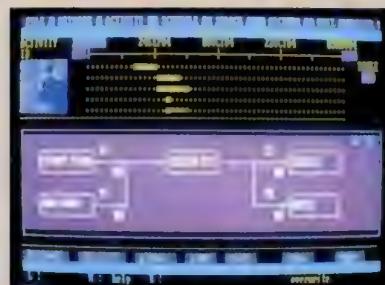
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DESKTOP COMPUTERS

# MONROE SYSTEM 2000

*80186 machine has poor IBM PC compatibility and big price tag*

BY KEN FREEZE

Review Board

**M**onroe's System 2000 desktop computer has started life with high praise from its maker, which claims the machine "starts at the competition's standards and goes on to exceed them in speed, flexibility, and simplicity." It's a good system, but probably not as good as all the hype.

The competition, clearly, is the IBM PC and other compatible 16-bit systems. Monroe has indeed attempted to incorporate the best characteristics of many different systems into the System 2000. In doing so, though, Monroe has ended up with a system that may be just a bit out in left field for some people. While just about every other 16-bit computer introduced in the last year or two has been fairly compatible with the IBM PC, Monroe has chosen to take a different route and move somewhat away from such compatibility. The choice shows up mostly in the selection of software available.

At the heart of the Monroe system is the Intel 16-bit 80186 microprocessor, a faster and improved version of the Intel 8086. Like the 8086, the 80186 handles data in full 16-bit units. The IBM PC and many competitors instead use the 8088, which can handle information internally in 16-bit units but must send and receive that information from the outside world 8 bits at a time. The use of the 80186 in this machine results in a noticeable increase in speed over the IBM PC or the Compaq Portable, although not as much of an increase as you might expect.

Some of the System 2000's other features include a battery-operated clock/calendar, two serial ports, one parallel port, five expansion slots, and 128K of random-access memory. The memory can be expanded to a maximum of 896K. The machine also has what could be called "nonstandard" 720K capacity floppy disk drives and can be obtained with an internal hard disk drive as well.

The System 2000 comes in several versions, with varying amounts of memo-

*Ken Freeze, a photojournalist and magazine editor, has used the IBM PC since it was introduced in 1981. It now gets three times as much use as the family television.*

ry, disk drives, and monitor types — and prices ranging from expensive to downright steep. The basic model, MS 2111, which retails for \$3,095, includes 128K of memory, one floppy disk drive, and an amber monitor. We tested model MS 2322, which includes 256K of memory, one floppy disk drive, a 10-megabyte internal hard disk drive, and a red-green-blue monitor — all for a whopping \$6,295. This is not an economy computer.

All those components are housed in a single cabinet. In the back of the cabinet are two power outlets. These are handy for plugging in your monitor and printer without cluttering up your wall outlet.

The Monroe's 92-key keyboard is a big improvement over that of the IBM PC. In fact, it's very much like that of the TI Professional, with separate cursor key and number pads, and 14 function keys across the top of the board. There are also lighted caps lock, numbers lock, and scroll lock indicators. The keys feel just a little mushy, but you can set the system to provide a "beep" when a key is pressed if you feel the need for an audible key response. You can adjust the keyboard to three angles for added comfort.

Monroe provides a choice of two monitors as part of the System 2000: an amber monochrome screen and a red-green-blue color monitor. Both make use of the same internal circuit board and both provide 640- by 400-pixel, bit-mapped graphics. They sport built-in, turn-and-tilt pedestals that are just about the best we've seen. They allow for easy adjustment of the screen.

The color screen we tested was of good quality — as good as the majority of better red-green-blue monitors. Combined with the ergonomic design of the screen, we think it is a nice choice.

Optional hardware for the unit available through Monroe includes a Z80-based, 8-bit coprocessor board; an RS-232C/synchronous data-link control communications board; add-on memory boards; and a 15-megabyte, external hard disk drive. Monroe includes two operating systems with the machine: MS-DOS (with GW-Basic) and CP/M-86 DPX.

At this point, you will probably be asking yourself the same question we did: What's wrong with a system such as this? Well, from the perspective of the included hardware, almost nothing. Only when you start getting down to the software does the system start to falter just a little.

The machine's floppy disk drives are the culprit. At the same time as they provide you with extra storage, they also prevent you from starting the computer if

## InfoWorld Report Card

### Monroe System 2000



|                | Poor                     | Fair                     | Good                                | Excellent                           |
|----------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Setup          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Ease of Use    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Performance    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Documentation  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Serviceability | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

|                | Poor                     | Fair                     | Good                                | Excellent                           |
|----------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Setup          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Ease of Use    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Performance    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Documentation  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Serviceability | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Summary:** The Monroe System 2000, a costly machine, includes several of the best features of 16-bit computers. But it has sacrificed IBM PC compatibility to do it, and you will have to check software compatibility and availability carefully because of the 720K floppy drives.

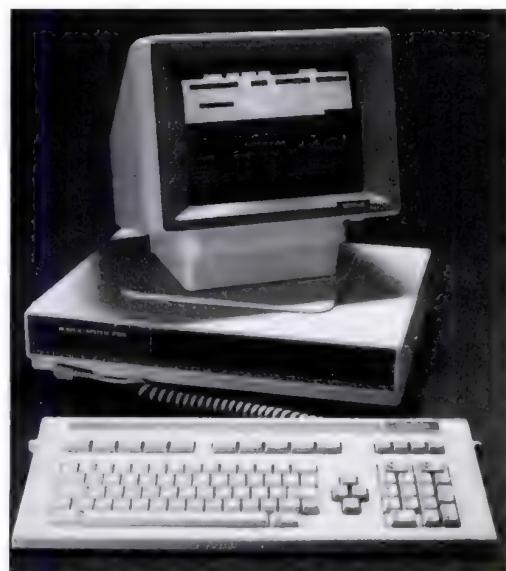
**Product details:** List price, \$3,095 (basic model). Includes 80186 microprocessor running MS-DOS or CP/M-86; 128K RAM; one 720K floppy drive; keyboard; amber monitor; two serial ports; parallel port; five expansion slots; clock/calendar. Memory can be expanded to 896K. Manufactured by Monroe Systems for Business, The American Road, Morris Plains, NJ 07950; (201) 993-2000.

**FOUR SYMBOLS:** Top-notch product

**THREE SYMBOLS:** Recommended

**TWO SYMBOLS:** Try before you buy

**ONE SYMBOL:** Not recommended



Monroe's System 2000 sports an adjustable display that comes in either amber monochrome or color.

you use a disk not in the 720K format. Because most MS-DOS software you can purchase comes in either a 160K, single-sided or 320/360K double-sided format, you might not be able to use those disks for starting purposes.

Monroe does provide, with its versions of the operating systems, utilities for transferring programs and files from the smaller to larger capacity disks. The utilities, however, won't work with most disks that employ copy-protection schemes or that use operating systems other than MS-DOS or CP/M-86 (such as the UCSD p-System). Such a limitation may mean you can't use your favorite programs until Monroe-specific versions come out.

Fortunately, Monroe has made available many software packages tailored for the System 2000, including Wordstar, Dbase II, Supercalc, and Condor 3. Monroe also offers several total software packages for different applications, such as health care, accounting, and wholesaling.

If you decide to buy software off the shelf, though, beware. Software that runs under PC-DOS — made expressly for the IBM PC — probably won't work on the System 2000. If the program is designed for use with MS-DOS and it's *not* copy-protected, Monroe says there's an 80 percent chance the program will work without a hitch. This really means you have to examine your software requirements carefully before you invest in the machine.

Aside from this, the 720K capacity is welcome; it seems that a floppy never gets full. Such high capacity disks can also reduce the number of disks you may need for storing files. In addition, Monroe is aiming heavily at what used to be called the "turnkey" system market, in which all

the hardware and software begins running automatically when you turn on the computer. Monroe wants to provide vertical applications, general purpose programs, and a machine in a single package. Combining those with training and service, Monroe wants to be a "one stop" shop for buyers.

You will find the Monroe easy to get up and running. The guide to operations manual takes you through setup of the Monroe step by step and includes tutorials for both MS-DOS and CP/M-86 that show you how to use most of their commands — something we'd like to see more often in IBM PC-style machines.

Also included with both operating systems is a program called Install, which you should use before you get too far along with any of your programs. Install makes some changes to the operating system that permit you to later specify some system configuration information via software. The Install program gets its information by asking you several questions about your particular system. This effectively takes the place of setting those tiny switches inside the computer and makes life a lot easier for one who shudders at the thought of taking a screwdriver to his computer.

When you turn on the machine, it automatically runs a short diagnostic routine to discover any potential trouble. Should a problem arise, there is a troubleshooting section in the back of the guide to operations. Many of the solutions listed end by telling you to call your Monroe representative, though, so you might have to call Monroe if the diagnostics indicate trouble.

Setting up the hard disk drive is easy; a menu-driven program allows you to accomplish the task in just a few minutes.

The manuals for the supplied software are, for the most part, quick rewrites of those normally sold with the off-the-shelf versions of the programs. They have mostly been changed to add Monroe's name. The hardware is documented by the guide to operations, a small guide to operations for the hard disk, a CP/M manual, and an MS-DOS manual. The Basic language has its own manual. The tutorial for the operating systems is the documentation's best feature; the rest of the documentation is up to par, but that's all. It's not exceptional.

Most of the Monroe-supplied software we examined included tutorials to help you get started.

If this sounds like the type of computer system you've wanted, don't run to your local computer store asking for it. The Monroe System 2000 is available only through Monroe. You will have to call the manufacturer, Monroe Systems for Business, and ask for the phone number of the Monroe representative in your area.

The System 2000 is sold with a 90-day parts and labor warranty. Additional service is available for a cost from Monroe. The firm can provide on-site training and service for all the hardware and software you purchase from it.

On-site service, where available, is provided within one day. One service representative with whom we spoke said that Monroe tries to be on-site within four hours of a call, certainly some kind of record (if Monroe manages to stick to it).

Monroe is providing a total computer system designed to meet the needs of small businesses. If you're looking for a single source for your hardware, software, training, and service needs, and you don't care about IBM PC compatibility, then the Monroe System 2000 could be for you. If you're already hip deep in IBM PC software, though, it's best to turn somewhere else. □

#### PORTABLE COMPUTERS

## KAYPRO 2X

*A return to the philosophy of utilitarian computing*

BY JOHN LOMBARDI  
Review Board

**N**ot so long ago, Kaypro computers became the premier representatives of the generic microcomputer. Kaypro machines have since grown beyond the basics, with expansions and additions providing extra memory capaci-

*John Lombardi is a professor of history and author of five books. He has been working with computers since 1967.*

ty, hard disk drives, and other features. Fear not, however: The transportable Kaypro 2X carries on the tradition of inexpensive utility computing.

The 2X is stark utilitarian hardware. It is sold with an impressive quantity of useful software and the Juki 6100 daisy-wheel printer as the Kaypro Business Pak. The package provides sufficient computing power to handle many tasks encountered by small businesses, individual professionals, school teachers, poverty stricken writers, and others whose com-

puting needs do not demand state-of-the-art capabilities.

The 2X has a keyboard, 9-inch green screen, two double-sided, double-density, half-height disk drives, and three ports (one parallel Centronics and two RS-232C serial). Everything about this machine speaks to utility, and nothing to aesthetics, finesse, or technological sophistication. It belongs to that class of transportable computers that are similar in weight and appearance to portable sewing machines.

The screen displays a sharply defined character set along with reverse video and some primitive graphics. You can display the graphics characters through the Basic programming language with a relatively complex sequence of control characters. The screen display zips along quickly in conjunction with programs such as Wordstar, and the sharp characters are remarkably easy to read.

## InfoWorld Report Card

### Kaypro 2X



|                | Poor                     | Fair                                | Good                                | Excellent                           |
|----------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Setup          | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Ease of Use    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Performance    | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Documentation  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Serviceability | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

**Summary:** The Kaypro 2X computer is a plain vanilla, transportable CP/M machine that comes with extensive software, no expandability, and offers reasonable performance at a bargain price. Good for word processing, but you should try this machine before buying to see if you like the keyboard, the screen, and the dealer. You are likely to see quite a bit of all three.

**Product details:** List price: \$1,595. Includes Z80A processor running CP/M; 64K RAM; two 400K, 5 1/4-inch disk drives; two RS-232C serial ports, one Centronics parallel port; 9-inch green monitor; 11 application packages. Manufactured by Kaypro Corp., 533 Stevens Ave., Solana Beach, CA 92075; (619) 481-4346.

Typists will think the keyboard feels cheap — because it is cheap. Mounted in a detachable aluminum enclosure with a slanted base, the keys all work fine with a very light touch. The placement of the alphabet keys is standard Selectric. No control or special function keys appear, beyond the usual escape, tab, control, backspace, delete, and arrow keys and a numeric keypad. All keys except control keys repeat.

Will this keyboard last a long time? It's hard to tell. The constant pounding of a professional writer may wear it out, but during the period of our test, it worked fine. The computer makes a soft electronic squeak each time a key is pressed, a noise that prompts an urge to squirt oil on the keyboard. Unfortunately, you have to run a Basic program to turn this noise off each time you start the machine.

The half-height drives have positive disk latches that pop the disk into position and pop it out into your hand when you open the door — a very nice touch. One of the drives on our test machine squeaked as its recording head moved back and forth across the disk and sometimes required extra time for the drive to move the head beyond the sticking point. The disk drive light stays lit on the currently selected disk drive whether it is spinning or not, and a bright red light next to the screen tells you the computer is on.

In addition to the sticky recording head, our test machine had a defective printer port that would work for only 15 minutes each morning. A friendly, knowledgeable, and helpful Kaypro telephone representative told us to return the machine to a dealer for exchange or repair. Quality control difficulties with these machines have appeared with some frequency, so be sure of your dealer's ability to support the computer before you buy it.

This machine has 64K of memory, but the rest of its technical specifications remain somewhat vague in spite of the voluminous documentation that comes with the machine. Nowhere does it indicate the difference between a Kaypro 2 and a 2X, the options available for this machine, the disk capacity, or what type of microprocessor it has. A good dealer should know these things.

We'll save you the trip, though. The Kaypro 2X differs from the Kaypro 2 in that it has two double-sided, double-



The utilitarian nature of the low cost, CP/M-based Kaypro 2X is evident in its stark, metal enclosure of industrial design.

density diskette drives with a capacity of 400K each. The machine uses the same 4MHz Z80A microprocessor as the Kaypro 2. Options: None, unless you connect peripherals to the three ports. The screen displays 24 columns of 80 characters and has a graphics mode that can display 100 by 160 pixels — hardly dazzling resolution.

To set up the machine, you take it out of the box, open the cover, plug the cord into the keyboard and the computer, insert a master disk in drive A, plug the machine into the wall, and turn it on. That's all. No cards to add, no switches to set. This is a "what you see is what you get" microcomputer. There are no hidden features, no options, no choices.

The computer comes with the CP/M 2.2G operating system, a version of CP/M set up for the Kaypro. It installs easily, works flawlessly, and is — well, CP/M. It comes complete with cryptic messages, obscure commands, and the other characteristics that have endeared this operating system to a generation of computer aficionados. CP/M, of course, has all the virtues of a standard. Programs abound for the system. The amount of software that is usable on this machine is almost incredible in size, variety, and quality. If a CP/M program has no unusual hardware requirements, it will run on the Kaypro without difficulty.

Like other Kaypro computers, this machine arrives with enough software to sink any novice. Here's what you get: Digital Research's CP/M 2.2G; Microsoft's MBasic (Basic-80) and OBasic; MicroPro's Wordstar, Mailmerge (3.3), Datastar, Reportstar, and Calcstar; Chang Labs' Profitplan; Oasis Systems' The Word Plus (1.2); and a neat typewriter emulation program called Type-It. You also get some miscellaneous utilities and games.

This is not the place to review the capabilities and limitations of these soft-

ware packages in detail, but a few words about the combination may prove helpful. The CP/M system includes the normal set of utility programs, including editor, assembler, and debugger. In addition, Kaypro includes a disk conversion program that will convert Kaypro disks into a wide variety of other formats. Unfortunately, this very useful item will not convert a disk to the PC-DOS format standard for the IBM PC. This omission greatly reduces the utility of the Kaypro within the IBM PC world, and is inexcusable since such conversion utilities exist and could have been included in the grab bag of programs. The operating system disk also has a nifty configuration program that sets up various CP/M parameters for serial printers and the like.

Along with the application software, Kaypro includes some public domain games and two versions of the Basic language. MBasic is a standard microcomputer-interpreted Basic language with wide support and many programs in the public domain. OBasic is an older version needed for some games and other programs.

The big hooks in this package, of course, are the major applications. Wordstar and Mail Merge, for word processing, list management, and document assembly, represent industry standards. Kaypro provides the latest version (3.3) of this program set. The spelling checker provided is Word Plus, a well-regarded program.

Complex, powerful, and difficult, MicroPro's database management system, composed of Reportstar and Datastar, provides more than enough features for data management tasks appropriate for a computer of this capacity.

Spreadsheet calculations can be done with either Calcstar, a relatively old spreadsheet from MicroPro, or Profitplan, a slightly more recent entry from Chang Labs. Neither of these products is near the state of the art in power, flexibility, or ease of use, but both offer useful capabilities.

The documentation supplied for the software in this package all comes in the same size and color, but inside the covers Kaypro has provided reproductions of the different programs' original software documentation. Some of it is good (the Wordstar 3.3 manuals), and some is thoroughly opaque (Datastar and Reportstar manuals). The computer itself is only modestly documented, with practically no technical information and precious little general information provided. Although there are some nice introductory manuals, they often refer to software no longer with the package or reference other versions of the computer. A knowledgeable friend could make using all this documentation much easier.

So what's the recommendation on this machine? Well, it's your standard issue microcomputer with a complement of excellent to so-so software. It can't be expanded, it can't do anything really fancy, but it performs word processing and basic programming very well indeed, performs database management with unspectacular competence, and manipulates spreadsheets of modest size with considerable facility.

The machine represents frozen technology. New programs for this machine are scarce, improved versions of old programs rare, and future development

unlikely. But the price is right, the package works, and you can hardly get a better computing value for your money.

When your requirements grow, you will have to buy a bigger and more advanced computer. Until then, the Kaypro will do an admirable job. Its hard-edged industrial design will appeal to some, its plain competence will attract others, and its outstanding price will convince many more. If you take the Kaypro 2X for what it claims to be and are willing to invest some time to learn how to use it, this can be a most satisfactory computer. □

#### BUSINESS SOFTWARE

## BACK TO BASICS

*A capable accounting package for small businesses*

BY CYNTHIA E. FIELD

Review Board

**A**t last there's a professional accounting package for those of you whose small business doesn't quite fall into the Fortune 500. The maker is Peachtree Software, and its little marvel is the Back to Basics accounting system. What's especially attractive about Back to Basics is that versions are available not just for the IBM PC but also for other popular computers — the Apple II series, the Atari 800 and 1200 XL, the Commodore 64, and the IBM PCjr.

What's more exciting, you won't go bankrupt buying Back to Basics. Most versions cost just \$195; the IBM PC version, \$295.

The package consists of three modules, each on a separate diskette (general ledger, accounts payable, and accounts receivable). You can use these individually or integrate them. Back to Basics is a double entry, accrual accounting system; the program conforms to generally accepted accounting practices. While its ease of use will please you, its many features should keep your accountant happy. Also, the included password protection gives your figures a measure of security.

Among its features are those you would expect from a serious accounting package. Back to Basics offers you a built-in chart of accounts, listing account names and numbers for liabilities, equity, revenue, cost of sales, and expenses. You can easily modify this standard chart to accommodate the

*Cynthia E. Field, a teacher for 14 years, has instructed classes in technical writing, computers for children, electronic spreadsheets, and word processing. She is also a microcomputer consultant and a contributor to microcomputer journals.*

## InfoWorld Report Card

### Back to Basics



|                | Poor                     | Fair                     | Good                                | Excellent                           |
|----------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Performance    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Documentation  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Ease of Use    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Error Handling | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Summary:** Peachtree's accounting system for small businesses is a very capable product with a reasonable price. It can easily handle most needs of small businesses, provides complete reports, and comes with an excellent manual. Though you might want your accountant around when you first use it, it will become a breeze.

**Product details:** List price, \$295 (IBM PC); \$195 (others). Version tested available for the IBM PC and compatibles running PC- or MS-DOS. Available for other popular machines. Requires 64K RAM; two disk drives; printer. Published by Peachtree Software Inc., 3445 Peachtree Road N.E., Atlanta, GA 30326; (404) 239-3000.

specifics of your business. You might find that having one accumulated depreciation account does not give you precise enough information; if this is the case, you can subdivide this category into as many accounts as necessary.

We used the IBM PC version of Back to Basics. With double-sided drives, your data diskettes can handle up to 254 general ledger accounts, 1,500 checks, and 4,500 entries per month. The accounts payable module can handle 115 accounts, 700 vendors, and about 1,500 invoices and 520 payments per month. The accounts receivable module lets you keep track of 750 customers and 1,700 payments.

With single-sided drives, the number of monthly entries to the general ledger and the number of customers, payments, vendors, and distributions within accounts payable and receivable are cut approximately in half.

You will be pleased with the general ledger reports available to you on-screen or in printed form. These reports include: chart of accounts; general journal; cash sales, receipts, and disbursements journals; account activity report; cash reconciliation form; check registers; and detailed general ledger. You can run a trial balance at any time. Back to Basics automatically posts to the general ledger at month's end and prints an income statement and balance sheet.

You can print 21 reports from the accounts payable and receivable modules, including the appropriate ledgers and journals. Back to Basics also prints checks, statements, and mailing labels for you.

The package performs remarkably well. The drudgery associated with manual accounting systems is lessened by this program's flexibility and speed. We invited an independent expert, who is both a certified public accountant and a computer consultant, to peruse Back to Basics with us. With the exception of a minuscule criticism of the format of the detailed general ledger and balance sheet, he conceded that the program might not be well-accepted by accountants — but only because it may lessen demand for their services.

Back to Basics was designed, in fact, for the nonaccountant. To say that entering figures is easy is an understatement. The program ignores incorrect information you may try to feed it; it won't fail on you, and it provides immediate warnings if your accounts are out of balance. You need only press the escape key to make corrections on the screen. When you press the return key, a highlighting cursor moves from entry to entry. When you reach critical points, you receive ample warnings about creating backups — which you can do without leaving Back to Basics.

While that process is straightforward,

getting around an accounting system that offers 36 jargon-filled menus within three modules is not so simple. You will have to take the time to thoroughly prepare yourself and organize your data before starting to use this system. For the business person who is new to accounting, Peachtree provides lots of help. Still, it would be wise to retain the services of your own accountant during initial work (as well as to advise you as you go along — computers are no substitute for professional knowledge and experience).

The documentation consists of a 374-page handbook written by Robert N. Anthony, a recognized financial expert and author, that is really a miniaccounting text and guidebook all in one. The handbook, divided into six clearly defined, color-coded sections, offers a tutorial based upon a hypothetical small business (Scott's TV & Stereo). Following the tutorial for each module is a reference section.

A business-situations section shows you how to handle circumstances peculiar to your business. Retail businesses, for instance, will want to know how to adjust for sales returns and allowances, layaway sales, and sales discounts. Guidance on dealing with bad debts, establishing petty cash accounts, and recording patent purchases is given.

An appendix listing the chart of accounts and system error messages is followed by a thorough, 10-page index.

Other printed materials support and enhance the handbook. These include a hardware booklet, designed to help the new computer owner install Back to Basics properly on his system. The sample

reports booklet contains examples of printouts that can be generated with the program. Lastly, a "road map" shows all menus with cross-references to appropriate handbook pages.

The support offered by Peachtree is among the best you will encounter. Peachtree's Customer Assurance Program guarantees you a full range of services: postage-paid registration, 90-day limited warranty, free telephone support for 90 days, and diskette replacement after 90 days for \$25. We were pleased to read in Peachtree's warranty that "the program substantially conforms with the program specifications contained in the documentation." We were surprised to find that Peachtree will, under certain circumstances, refund your money or compensate you up to \$1,000 for "losses due to performance or nonperformance." Compared with the usual disclaimer of responsibility for anything at all, even \$1,000 is a welcome admission that Peachtree stands behind its product.

When we called Peachtree, we reached a cordial support person. We asked her what we would be missing if we purchased Back to Basics instead of Peachtree's more expensive (\$595 per module) Business Accounting system. She told us about the deficiencies in Back to Basics — the lack of modules for fixed assets, payroll, job costing, and inventory; the inability to print invoices; and the inability to transfer files later to the more sophisticated Business Accounting program.

She also emphasized that Back to Basics is a very capable accounting program. We couldn't agree more. □

#### EDUCATIONAL SOFTWARE

## SMART LOGO

*An excellent version of Logo with great graphics*

BY DAVID WILSON

Review Board

If any programming language will ever challenge Basic for quantity of versions and dialects, it will probably be Logo. We count 20 versions now on the market, with more in the design stage. Any microcomputer manufacturer wanting to be a contender in the home/education arena must be able to point to a Logo for its machine.

It is, therefore, not too surprising that the folks at Coleco arranged to provide a version of Logo for their Adam home

*David Wilson shows teachers how to use personal computers. He also administers and teaches in an adult-education program on personal computers.*

computer system. What is surprising, given the Adam's reputation for low quality, is just how good Coleco's Smart Logo is. Coleco, like Apple, went to Logo Computer Systems of Lachine, Quebec, for its product. Coleco came back to the United States with a version of Logo that outperforms any others we have seen or used.

We were first surprised by the speed with which its turtle cursor — for once a turtle that looks like one — completed a simple square drawing routine. Speed is not particularly critical in simple drawings, but for some complex routines, you can spend an hour waiting for the turtle to finish. We performed a simple speed test, executing a short routine of drawing 360 squares, each rotated 1 degree from the prior square. The Smart Logo turtle

completed the task in 100 seconds.

Using an Apple IIe with 128K of random-access memory and the same routine, we also timed Apple Logo I, Apple Logo II, and Terrapin Logo. The results were revealing: Terrapin Logo took 250 seconds; Apple Logo I, 177 seconds; and Apple Logo II, 152 seconds. Smart Logo clearly has the swiftest turtle.

Speed is not Smart Logo's only surprise. We were delighted to find that Smart Logo offers 16 colors for drawing or background, nearly three times as many as the software mentioned above. The additional colors permit the creation of subtler and more complex images.

But a more exciting discovery followed. Smart Logo has not one, not 10, but 30 turtles, all stacked on top of each other. You can direct any one of them individually, all of them together, or a selected group of them. If you choose, you can have

all 30 on the screen at once, each performing different tasks.

While that alone might win your loyalty, the Smart Logo turtle has still more surprises. Under normal circumstances the turtle is indeed shaped like a turtle (and quite a handsome one at that), but there are 60 additional, predefined shapes you can select through the "setshape" command. They include several geometric shapes, a cat, a dog, a truck, a car, a plane, and a rocket.

There is also a very easy-to-use shape-editing procedure, which permits you to design and store up to 60 different shapes, each of which you can call on with but a few keystrokes. Smart Logo also provides a command that sets the turtle's color to any one of 16 possible shades. This means that you can separately control 30 turtles, each of which can be any one of 60 possible shapes and any one of 16 colors.

When you combine all these facilities, you get a Logo that provides the tools for very sophisticated animation. You can design turtle shapes to represent whole shapes or elements of a multipart shape, assign those shapes to separate turtles, and choose and set the color of the turtles. Then you can command the turtles to the appropriate screen positions and provide them with movement commands. This capability is quite sensational.

Obviously, there is a lot to explore in Smart Logo. There are all the usual Logo commands (primitives) and most of the recent additions to the language. Two such additions are the fill command, which quickly fills a shape outline with color, and the clean command, which clears the graphics screen but lets the turtle retain its last position and heading.

There are also new primitives that expand your ability to control the turtle easily. One such is "setspeed," which sets the turtle moving at a constant speed from -128 to +128, incredibly useful in animation. Smart Logo also has sound and music capabilities, which can be added to

animation. Smart Logo has more extensive list processing capabilities than we have seen in any prior version of Logo for microcomputers. We expect, however, that the graphics potential here will, as in other versions, seduce the interest and attention of the majority.

The documentation for Smart Logo is superb. It consists of a 66-page tutorial and a 300-page reference manual in a single binder. The extensive index at the back refers to information in both manuals.

The presentation in the tutorial is pleasant, low key, and lucid. The reference manual is well-written and well-organized. In addition, when you start Smart Logo, the program offers you the option of running an on-screen, interactive tutorial. This was helpful and also provided a demonstration of Smart Logo's potential for animation.

We have to color this admittedly rave review with a pair of disappointments resulting from the Adam hardware.

Although Adam disk drives really do exist, few seem to have found their way to dealer shelves, let alone homes. As of this writing, no software for the Adam has appeared in disk form. Adam uses cassettes for external storage more effectively than you might expect, but as good as they are, the method is still far slower than even the slowest of disk drives. Saving and retrieving files created by Smart Logo can cause an annoying wait.

More disappointing — and more annoying — is Adam's inability to use a graphics printer. The result: There is no way to produce a printout of the beautiful graphics you can create with this program.

With both these things considered, Smart Logo is still spectacular. It sets new benchmarks for Logo on personal computers and establishes Coleco as a Logo frontrunner. This program alone could make the Adam one of the most attractive computer choices for use in the home or school. □

#### DATABASES

## 1ST BASE

*Barely sufficient and boring — back to the drawing board*

BY STEVE MANN  
Review Board

Contrary to what one self-proclaimed industry visionary says, adequacy in software is not enough — it's

Steve Mann is computer consultant to a public accounting firm and a free-lance writer. He is the author of a book on distributed processing.

boring. This ennui is particularly apparent with less-than-innovative software for the Macintosh. One merely adequate program is 1st Base, a relational database manager from Desktop Software Corp. It suffers from a lack of attention to detail; performance, ease of use, documentation, and error handling could all be better. We don't recommend the product.

A relational database manager is not much different from a simple file manager,

## InfoWorld Report Card

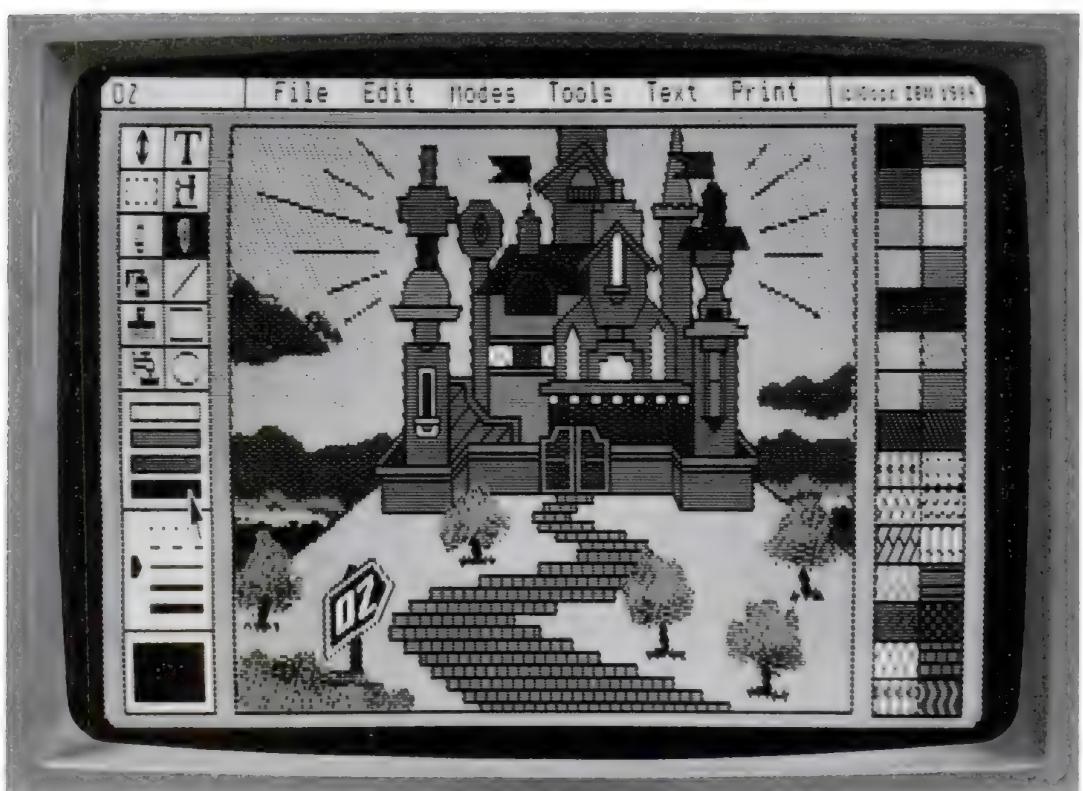
### Smart Logo

|                | Poor                     | Fair                     | Good                     | Excellent                           |
|----------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Performance    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Documentation  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ease of Use    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Error Handling | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

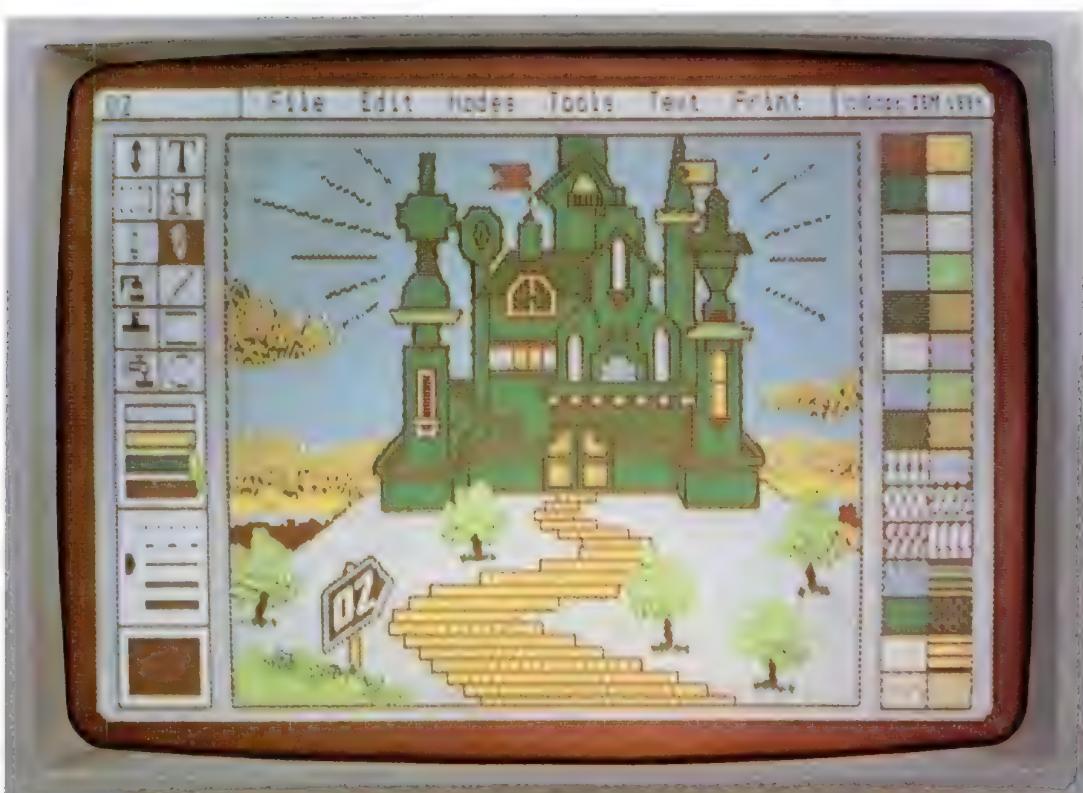
**Summary:** Smart Logo, a spectacular version of the educational Logo programming language for personal computers, has as its forte graphics and animation. With 30 separate turtles, 16 colors, and 60 turtle shapes, you have a great variety of choices. The speed at which the turtles operate is also much better than in comparable Apple II versions of Logo. This may help the Adam make some inroads into the educational market.

**Product details:** List price, \$79.95. Version tested available for Coleco Adam. Requires 64K RAM; one data cassette drive; color TV or monitor. Published by Coleco, 999 Quaker Lane S., West Hartford, CT 06119; (203) 725-6000.

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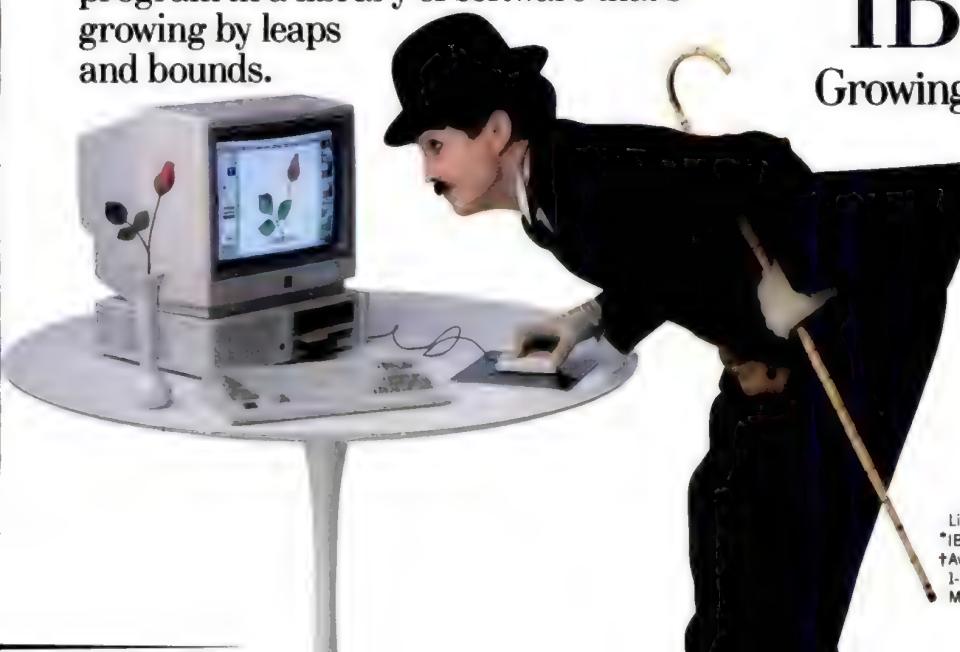
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|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
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| Double-sided, double density Capacity: 360KB      | 40- and 80-column Resolution:<br>4-color: 640h x 200v<br>16-color: 320h x 200v                                                  |
| Processor                                         | Expandability                                                                                                                   |
| 16-bit 8088                                       | Open architecture<br>Optional 128KB Memory Expansion Attachment(s)<br>13 ports for add-ons, including built-in serial interface |
| Keyboard                                          |                                                                                                                                 |
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which lets you create and manipulate a group of records having the same structure. A relational product gives you two additional capabilities: projecting and joining. *Projecting* is fancy word for creating a new database with a subset of the records and fields from an existing database. Joining allows you to combine two dissimilar databases, using a common field, into a new collection of data. The 1st Base package has both capabilities.

You can use 1st Base to create databases with up to 50 fields per record. Each field name is limited to 12 characters. Fields can be either numeric or text, with numbers limited to 17 digits, text to 50 characters. The total size of a database is limited by the amount of space available on your diskette, but the capacities are hardly noteworthy.

You can create two types of reports from a 1st Base database — list and group. List reports show a group of fields from a

database, with optional column totals. Group reports contain statistical information, such as the minimum, maximum, and average value of a particular field. Both types of reports can be sorted on one or more fields, and you can select a subset of records using various criteria.

The program's report capabilities are reasonable, but not terribly flexible. You can position fields either horizontally or vertically. You can also specify limited combinations of the two styles. It's not possible to combine list and group reports. If you need both detailed information and statistics, you have to create two reports.

If you do create two reports, you can't combine them readily. The program all but ignores the concept of passing information between itself and other programs. You can save a copy of a report's screen display as a Mac Paint document. There is no way, however, to examine or edit a 1st Base report with Mac Write. There are no mechanisms for moving data between this database and another application. For a program whose basis is integration, this is just plain unacceptable.

One of 1st Base's best features is the ease with which you can change the format of a database. You can add, delete, or change a field at any time. There are simple rules governing each type of change. For instance, if you reduce the length of a field, the right-most characters of that field will be truncated. In this regard, 1st Base is more flexible than most database managers.

The data in a 1st Base database is stored as a series of sequential records. This makes browsing from one record to the next fast; it makes searching for a specific piece of information slow. To view a database's records in a particular order, many programs let you create indexes, special files that facilitate rapid, ordered record retrieval. With 1st Base you must instead sort the database, another slow operation. (In all fairness, part of the problem is the speed of the Macintosh's floppy disk drives.)

The program takes up approximately 240K of a 400K diskette. At first, you might think this allows you to store databases of up to 160K in size. This is true if you don't want to create any reports or sort your database. These operations *must* be done on the same diskette that holds your database, so you must leave enough free space for your largest sort or report file. These restrictions make the single-disk Macintosh even more annoying. The 1st Base program is best suited for use with a hard disk.

Most of 1st Base's capabilities — creating a database, entering data, generating reports, projecting, and joining — are reasonably straightforward. The Macintosh's user interface accounts for some

of this ease. But there are inconsistencies that make this product more difficult to use than it need be. For instance, to enter a record, you can either click the rightmost portion of the scroll bar or strike a shift/return key combination. To browse backward, you must click the left-hand portion of the scroll bar. A consistent use of command keys would make more sense. This is just one example of many minor but irritating user interface inconsistencies.

A bigger problem is that 1st Base defies one of the strongest rules of proper use of the Macintosh user interface: so-called "modeless" operation. The basic idea behind the Macintosh — and, for that matter, all descendants of the Xerox Star — is that you first choose an object with the mouse, then perform some action on it. Once you open a database with 1st Base, that database is always open until you quit or select another database. That by itself is reasonable, but there's no indication, such as a named window, that the database is active.

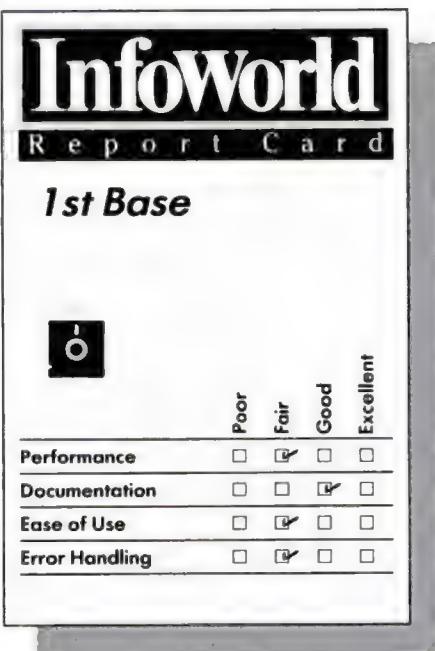
You perform almost all operations on this starting database without explicitly knowing which one it is. For instance, to append one database to another, you open the first database. To perform the operation, you close the first database and select the append command on the file menu. You then select the database you want to append, without specifically knowing the identity of the first database. This is a common problem with many of 1st Base's commands.

Error handling in 1st Base is good in all but one area — locked databases. You can add records to and delete records from a supposedly locked database. Unfortunately, you can erase a locked database. This is serious, and should give you as much security as knowing the inmates have the key to the asylum next door.

Compared to typical Macintosh documentation, 1st Base's cheaply produced black-and-white manual is somewhat lackluster. This does not detract from its usefulness; the organization and content are good. Each chapter is primarily tutorial, with a summary reference section at the end. The index and table of contents are good. In addition, 1st Base has reasonably context-sensitive on-line help.

We found one inaccuracy in the manual. The tutorial section on sorting assumes that one of the sample databases has been copied from one structure to another. The previous section omits that step, making the explanation of sorting confusing.

The 1st Base diskette you receive includes an update file for the manual. It says that 1st Base can create reports that are 132 columns wide. We were not able to get this feature to work. As far as we could tell, 1st Base prints all reports 80 characters wide, even though you can



**Summary:** 1st Base, a just adequate relational database manager for the Macintosh, just doesn't sport enough of the right stuff. Performance suffers because of a lack of information sharing and low capacity; ease of use because of a lack of adherence to Macintosh standard; error handling because it doesn't respect a locked database. Wait for the next version.

**Product details:** List price, \$195. Version tested available for the Apple Macintosh. Requires 128K RAM; one disk drive. Printer recommended. Published by Desktop Software Corp., 228 Alexander St., Princeton, NJ 08540; (609) 924-1711.

create and view much wider reports. When we called Desktop Software about this problem, it was surprised, but unable to correct the problem.

You can copy the 1st Base diskette, but the company makes use of the most annoying of the current crop of copy-protection schemes. As with more and more software on the market today, you must insert the system master when you first start the program from a copy. If you didn't like disk swapping on your Macintosh before, this kind of scheme won't improve your mood any. We want to encourage software developers to deep six this protection scheme and adopt ones with which you can make a limited number of functional backups that can run without a "key" disk. We are already aware of Macintosh programs that use this method.

You can obtain a working backup copy for \$25. Desktop Software provides reasonable telephone support.

All in all, 1st Base needs some work, particularly in its user interface, which is not up to the quality required on the Macintosh. It is reasonably easy to use, despite itself, because of the Macintosh user interface, but we mark it down to Fair here because of its lack of adherence to the Macintosh standard. The program's performance could also be beefed up. Its

capacity needs to be enlarged. Also, the developers have to understand the nature of information sharing on the Macintosh and make this program a functional part of the machine environment, not an end unto itself.

With so many reservations, we recommend waiting until Desktop has a chance to bring this product up to Macintosh par. □

## REVIEW RESPONSES

### LEADING EDGE CHEERLEADER

The keyboard you had trouble with in your review of the Leading Edge PC (September 3, 1984) has been scrapped in favor of a Key Tronic 5150, which is vastly improved over the IBM PC keyboard. The product now includes MS-DOS 2.11 and Microsoft Basic 2.0 instead of DOS 1.25 and Basic 1.0. It is only fair to point out, too, that almost any program written for IBM's Basic won't run on any computers other than IBM's. We have also run UCSD p-System programs (although not Jack 2) on the Leading Edge PC in our dealership.

We have been Leading Edge dealers almost since the machines were available, and we have not had a failure yet, not out of the box or after the machines were used for months. I personally have never seen a computer product as reliable as Leading Edge, and I was in field repair for years.

*Joseph H. Brubaker Jr., President  
WordSource  
Temple City, CA*

## THE CASE FOR THE CASE

You write as fact in your review of the Datalife disk drive analyzer (October 1, 1984) that "the IBM PC's drive is built into the system unit, unlike the Apple drive, so having the former serviced means essentially doing without the entire computer throughout the servicing."

Almost anyone who has had the outer case of the IBM PC off for any purpose, such as adding memory, adding a multi-function board, adding an internal modem, or even changing dip switch positions, would have observed that the disk drives on the IBM PC slide out the front of the system unit with the removal of one or two screws. The removal of a floppy disk drive from an IBM PC is no more than a five-minute task. If a problem is isolated to a disk drive in an IBM PC, then only the disk

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Thirty word processing programs were reviewed ... no other program received a higher overall evaluation than Volkswriter Deluxe."

*Software Digest Ratings Newsletter, January 1984*

“If WordStar™ set a standard ... Volkswriter Deluxe sets a new standard for transparency, simplicity, and speed. You can learn Volkswriter in under an hour ... because it does so many things exactly the way you think they should be done.”

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*Charles Spezzano, Whole Earth Software Review, January 15, 1984*

“Volkswriter Deluxe ... a simple way to word processing power ... for writers who like to think.” *Washington DC Capital PC User's Group Vol. 3, #4*

“Lifetree ... provides exceptionally helpful and competent assistance to registered owners, and the company's update policies are excellent.”

“In sum, this is a unique word-processing program.”  
*John Lombardi, Reviewer, InfoWorld, April 16, 1984*

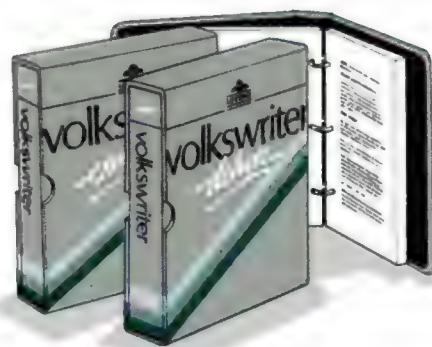
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drive has to be taken to a repair center.

Having a service representative remove and reinstall the drive only increases your costs. The purpose of the software you reviewed is to isolate a problem to a disk drive to eliminate the problems and costs of taking the entire system unit to the repair center.

*James F. Walker III  
Detroit, MI*

*Indeed, for some, the job of removing a drive may take only five minutes. But we think most readers find it undesirable to take their machines apart. — Editors*

## GRAFX PARTNERS

After reading your review of The Grafx Partner (October 22, 1984), I can just picture you berating the produce department manager of your local supermarket because the grapefruit you bought didn't come with a 10-page users manual, and you were frustrated trying to eat it without getting an occasional squirt in the eye.

There is a learning curve associated with everything, and this is especially true of graphics software. In my opinion, the documentation is absolutely unnecessary. As with any graphics software, the only way to learn is through use and experimentation — exactly what the manual suggests.

The program's unique and primary purpose, not even mentioned in the review, is to allow the user to surmount the limitations of virtually all other graphics software and to use them in combination (not simultaneously) to create a final screen image that is precisely what the user wants to achieve.

*Raymond A. Jacobson  
Riverside, IL*

**InfoWorld welcomes comments about its reviews from readers. Letters are subject to editing for space and clarity. Please address your correspondence to the Technology Editor, InfoWorld, 1060 Marsh Road, Suite C-200, Menlo Park, CA 94025.**

## HARDWARE

 **Angel Intelligent Buffer (LIGO Research)** — A time-saving device that handles printing while you continue to use your microcomputer. This buffer is easy to set up and use, but printing graphics when using it is difficult. (9/10/84)

 **Apple IIc (Apple)** — An attractive, transportable version of the venerable IIe that embodies the most

popular options in one sealed case. The machine is not a performance marvel for business and is packaged as a family or home machine. (7/9/84)

 **Apple Modem 1200 (Apple)** — A 1,200-baud intelligent modem that performs well. Its basic problem is atypically sloppy documentation and a lack of sufficient information about the Pro-DOS operating system. (7/23/84)

 **Bookshelf Series 100 (Ampro)** — A fast, easy-to-use CP/M computer at a good price. Includes word processing and database-management software. Assembly requires some technical know-how. (9/17/84)

 **Deskpro Series (Compaq)** — Compaq's second foray into IBM PC compatibles is another winner, sporting improved speed in a series of desktop models. The new keyboard is not as good as the original and more documentation is needed to facilitate more technical uses. (10/8/84)

 **Disk IIc (Apple)** — This external second drive for the IIc looks and acts just like an internal drive. No-sweat hardware. (10/8/84)

 **HP-110 (Hewlett-Packard)** — HP has put a lot of muscle — notably 1-2-3 in read-only memory — into a battery-powered, lap-size machine. When you add the battery-powered peripherals, it's not light, but in general the high price is justified. (8/27/84)

 **Xtra (ITT Information Systems)** — This is a relatively IBM PC-compatible desktop computer. The Xtra has some advantages over other IBM PC-style machines, good documentation, and good keyboard for touch-typists, but its display speed is much too slow. (10/15/84)

 **KB5151 (Key Tronic)** — For most uses this replacement keyboard is one of the most sensible and overdue accessories for the IBM PC. But beware of using it with some newer programs — Framework and Dbase III, among others — because of some compatibility problems. (8/6/84)

 **Leading Edge PC (Leading Edge Products)** — Faster, nearly compatible IBM PC clone. Suffers mostly from a keyboard with poor tactile response and a very noisy fan. (9/3/84)

 **Mad-1 (Mad Computer)** — An IBM PC compatible, comparably priced, that really shines when it comes to

speed, thanks to its Intel 80186 microprocessor. (9/24/84)

 **Maynard Winchester System (Maynard Electronics)** — An inexpensive way to give your IBM PC or compatible hard disk storage. Unfortunately, the documentation is too sparse, especially for beginners. (7/30/84)

 **Mindset (Mindset)** — Combining IBM PC compatibility with superb graphics, this computer's performance as a tool for artists and designers is outstanding. (8/13/84)

 **Polo System I (Polo Microsystems)** — This dual processor machine suffers from a plethora of annoying minor problems that keep us from recommending it, despite its fast main processor, color capability, and inclusion of printer and modem. (10/22/84)

 **Shuffle Buffer (Interactive Structures)** — A buffer that prints several copies or randomly prints files stored in its memory, which is expandable to 128K. (9/10/84)

 **STM Portable PC (STM)** — A full-size LCD screen, disk drives, and an 80186 microprocessor in a lightweight package, this could be a top-notch traveling office if not for a problem with a disappearing cursor. (8/27/84)

 **Super Mini-Floppy (Rana Systems)** — An alternative to hard disks, but some quality control problems are apparent; some documentation lapses could make setup complicated, too. (10/29/84)

 **Thinkjet (Hewlett-Packard)** — Makes lightweight, quiet ink-jet printing affordable. A rugged unit that produces high quality print on the proper paper. The paper-feeding mechanisms have problems. (7/16/84)

 **V-C-N Execuvision (Prentice-Hall)** — Gives IBM PC owners graphics department capabilities in an easy-to-use package. The chief problem is limits on using data from other programs. The optional libraries are recommended. (10/29/84)

## SOFTWARE

 **Aladin (Advanced Data Institute)** — Relational database system with large capacity and features suitable for complex data processing tasks. Advanced features make its use difficult; documentation problems and some commands make

it hard to learn. (10/22/84)

**○ ○ ○ Aura (Softrend)** — Four solid applications that are essentially separate programs. The applications share information, but not always easily. Well-priced and very functional on a fixed disk but impractical for floppies. (9/17/84)

**○ ○ ○ Clout (Microrim)** — Lets you find information in R:Base files using natural language. But extracting information is easier than creating reports, and inexact language can produce wrong answers. (9/24/84)

**○ ○ ○ Datalife (Verbatim)** — Disk drive testing program rates a drive's radial alignment, disk speed, disk clamping, and read/write accuracy. Can alert you to defects before they become serious. (10/1/84)

**○ ○ ○ Dbase III (Ashton-Tate)** — An easier-to-use update to Dbase II with improved error handling as well. Its menu system can be switched on or off at will. About the only drawback is the stiff price. (10/15/84).

**○ ○ ○ Desq (Quarterdeck Office Systems)** — This "integrating" package gives owners of IBM Personal Computers and compatibles power, complexity, and a multitude of features while integrating existing applications in a window environment. It makes data transfer between programs as easy as possible. (7/30/84)

**○ ○ ○ Dollars and Sense (Monogram/Tronix)** — The latest release of this home budget program cures ills mentioned in our original review. It still lacks the capability to exchange information with other programs. (10/29/84)

**○ ○ ○ Electric Desk (Alpha Software Corp.)** — Good integration of word processing, database management, spreadsheet, and communications programs. Price and ease of use are positive features, but the individual modules lack power. (10/15/84)

**○ ○ ○ Financial Cookbook (Electronic Arts)** — Thirty-two "recipes" for home financial calculations are easy to use and function properly. But the calculations can be handled on an ordinary calculator or with pencil and paper. (10/15/84).

**○ ○ ○ Flashcalc (VisiCorp)** — For \$99, this spreadsheet performs adequately, but in most respects the product pales in comparison to products of newer design. Documentation is a stumbling block for novices; lack of power is a

problem for experts. (9/3/84)

**○ ○ ○ Framework (Ashton-Tate)** — Our pick of the big integrated guns. Mostly solid integration, ease of use, and good individual modules — unless you have intensive database needs or very large spreadsheets. Its communications module is poorly integrated. (10/29/84)

**○ ○ ○ Friendly Writer (Friendly-Soft)** — A word processing bargain for beginners and those who write occasional letters. The integrated spelling checker is one of the best we have seen. It lacks the formatting and special printing functions of more expensive word processors. (8/20/84)

**○ ○ ○ Grafix Partner (Brightbill-Roberts)** — This graphics processor works alone or as a graphics enhancer in conjunction with programs that create their own graphics. Truly dazzling results marred by poor documentation we fervently hope is improved. (10/22/84)

**○ ○ ○ Habadex (Haba Systems)** — A Macintosh desktop organizer that tracks telephone numbers and appointments on screen and can dial calls. It lacks flexibility and doesn't always perform as expected. Poor error handling. (10/1/84)

**○ ○ ○ Assistant Series (IBM)** — An adaptation of the PFS series of word processing, filing, reporting, and graphing programs that lets the novice become proficient quickly. (9/10/84)

**○ ○ ○ Intuit (Noumenon)** — Second-generation integrated software package based on file management. Transfers data nicely between its applications, but not all its functions are as good as those of independent products. Manuals have problems. (10/8/84)

**○ ○ ○ Kamas (Compusophic Systems)** — Would you believe a CP/M-based outline processor? A programming language is also provided with Kamas to improve flexibility for advanced users. Nice to see such a cutting edge product for the forgotten 8-bit masses. (10/8/84)

**○ ○ ○ Mac Coach (ATI)** — Who needs a training program for the Macintosh? Despite its detailed explanations, \$75 may be too much to pay for one hour's training. Try Apple's Macintosh tours before you buy. (10/8/84)

**○ ○ ○ Mac Paint (Apple)** — A universally appealing graphics program that allows you to draw just about anything. This product is one of the best introductions to computing we have seen

— and a lot of fun. (7/9/84)

**○ ○ ○ Mac Write (Apple)** — This word processor is a breeze to use and capable of producing attractive documents. Hampered only by a lack of more advanced features and the limit on the amount of text you can use in one document. (7/9/84)

**○ ○ ○ Main Street Filer (Main Street Software)** — An easy-to-use file manager for the Macintosh makes good use of the machine's environment and permits you to design and quickly change simple records. It cannot work with other programs, file size is limited, and it is a bit pricey. (8/6/84)

**○ ○ ○ Micro Speed Read (CBS Software)** — A worthwhile investment for those who have wanted a computer to help them to faster reading and increased comprehension. The manual itself is practically a textbook on improving your reading. A sound educational approach in a quality product. (7/9/84)

**○ ○ ○ Microtrak (SoftTrak Systems)** — Uses the Critical Path Method of project management to manage, not plan. The good update reports can't compensate for skimpy documentation and the incapability to share information. (9/17/84)

**○ ○ ○ New Word for the PCjr (Newstar)** — A Wordstar look-alike at half the price. Has most features found in business-level packages. The nature of the product is complex, however, and it may be more powerful and complex than needed on the jr. (9/24/84)

**○ ○ ○ Nutshell (Leading Edge Products)** — A data manager for the IBM PC and compatibles that is easy to use and offers several features not normally found in this class of product. Its minimal printer support is some cause for concern, though. The publisher says it will beef up the support list. (8/27/84)

**○ ○ ○ Office Writer (Office Solutions)** — Operating nearly identically to the Wang line of dedicated word processors, this powerful and friendly word processor is a bit slow with large documents and lacks print spooling capabilities. (7/9/84)

**○ ○ ○ Omnis 2 (Organizational Software Corp.)** — The Macintosh version ignores every aspect of the machine's user interface, right down to fonts and the mouse. It's slow, difficult to use, and has poor documentation. Wait for the next version. (9/10/84)

**Omni Writer (Human Engineered Software)** — Sloppy programming makes this and the companion Omni Speller package difficult to learn and use. Add poor documentation and printing errors, and you can forget it. (10/22/84)

**Paper Clip (Batteries Included)** — This word processor for the Commodore 64 creates screen format files and manipulates columns. It will take you some time to learn its commands and directives. (10/1/84)

**PC Focus (Information Builders)** — Powerful microcomputer version of the mainframe Focus distributed data processing tool. The program is flexible and as easy to use as a program like this can get, but its documentation is inadequate. (10/8/84)

**PFS Proof (Software Publishing)** — Quick, versatile proofreader for word processors that use ASCII files. Goes beyond merely checking spellings into the fringes of artificial intelligence. Easy to use, like the rest of the PFS line. (9/3/84)

**Picture Perfect (Methods and Solutions)** — Paint program resembling

Apple's Mouse Paint appeals to children ages 4 to 10. Somewhat slower and has fewer features than other paint programs. (10/15/84)

**Practical II (PractiCorp)** — Visicalc clone for Apple series computers. Is supposed to integrate information. The spreadsheet is adequate, but editing and sorting capabilities are only rudimentary. (9/24/84)

**Please (Hayes)** — A good file manager with flexible and powerful reporting capabilities. But there's nothing that makes it really stand out from the rest of the crowd. (9/24/84)

**The Print Shop (Broderbund Software)** — Apple users can make colorful greeting cards, stationery, signs, and banners. This program requires no graphics card or graphics knowledge and comes complete with colored stationery. (9/17/84)

**Pro Aid (Micro Demon)** — Gives the Radio Shack Model 100 many functions and utilities that the manufacturer overlooked, including the capability to add 26 new programmable function keys. Pro Aid's documentation leaves something

to be desired, though. (8/6/84)

**Professional Series 3 (Schuchardt Software)** — Combining three programs in a single package, the Intesoft series provides spreadsheet, time management, and project management capabilities while using the same command and file structures. First-rate business software. (7/16/84)

**Project (Microsoft)** — An excellent example of a software genre gaining in popularity. Using the Critical Path Method, Project analyzes scheduling and resource allocation, producing useful, quality reports. (8/13/84)

**Pro Solutions (MicroPro)** — A series of templates that lets you use the more advanced capabilities of the Infostar database. Easy enough to use, but can be somewhat limited in formats without additional programming by you, which is no simple matter. (10/1/84)

**Qwerty (HFK Software)** — This word processing package does a remarkable job in only 64K of memory, but because the program is memory-based, you are limited to about 12 pages of text in a document. (7/16/84)

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## BASIC ENVIRONMENT

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| BASCOM-86 - MicroSoft                   | 8086  | 395 | 279 | COHERENT-NCI-Realtime    | PC/IDE 695   | 665  | SCREEN C View-validate  |
| BASIC Dev System                        | PCDOS | 79  | 72  | VENIX - "true V7" w/FTN  | PC/IDE 800   | 775  | Databurst-C, BASIC      |
| BASIC Compiler - BetterBASIC - 640K     | PCDOS | NA  | 185 | XENIX - "true S3" - inch | PC 1350      | 1295 | PANEL-86-many languages |
| CB-86 - DRI                             | CPM86 | 600 | 439 |                          |              |      | WINDOWS for C-fast      |
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## REVIEWS

**Reportflo** (*DayFlo*) — Provides Dayflo owners with the report writing capacity lacking in the original package. Gives flexibility in preparing reports. Despite the demand for hefty main memory and a hard disk, the combination is still slow. (9/10/84)

**Revelation** (*Cosmos*) — A relational database system and program generator that allows you to share information easily with many larger computers. Speed and features are excellent, but it is so big and complicated that it is best for large tasks and experienced users. Novices should avoid it. (8/27/84)

**R/Maker** (*Smartware*) — Used with Revelation, improves your ability to create a database system and use files created by other programs. Requires programming skills and is not for the casual user. Lack of adequate documentation makes use unnecessarily difficult. (9/3/84)

**Spellbinder** (*Lexisoft*) — Easy-to-master word processor with advanced formatting and printing features, but has substandard documentation and problematic customer support. (9/24/84)

**Symphony** (*Lotus*) — The encore to 1-2-3 integrates the world's best spreadsheet with word processing, a bit of database, communications, and graphics. But the supplied training falls short and the 600 commands are bound to confuse. More documentation needed. (10/29/84)

**The Write Stuff** (*Harper & Row*) — Word processing program with fewer features than most and some bizarre scrolling properties that prove frustrating. For novices and personal use only. (10/22/84)

**Think Tank 128** (*Living Videotext*) — One of the first quality products for Apple's Macintosh, this outline processor is an elegant product. Its only failing is the limitation imposed by 128K of memory on the machine, making it impossible to add long pieces of text to outline entries. (8/20/84)

**Traveling Business Manager** (*Traveling Software*) — A set of four cassette-based programs for lap computers. The only really useful member of the series on Model 100-type machines is the Traveling Expense Manager. The products are limited and slow on such machines. (7/30/84)

**Typing Tutor III** (*Simon & Schuster*) — Makes a tedious learning process more interesting by designing

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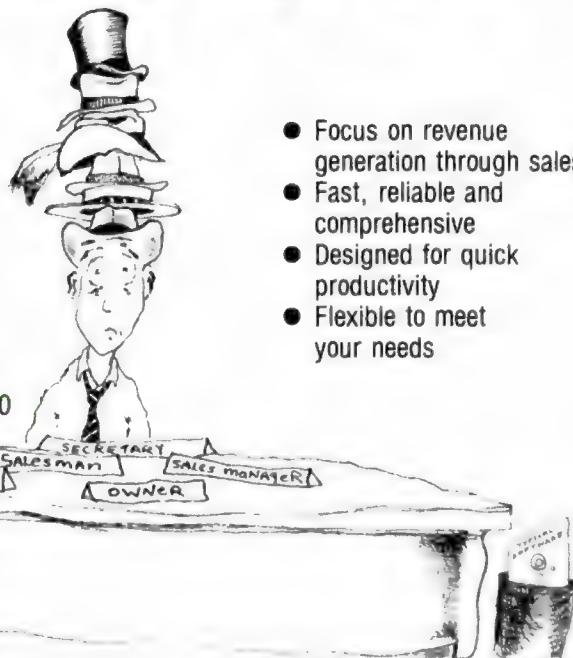
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individual learning programs for each user, drilling on problem areas, and providing full and useful reports of progress. (9/10/84)

⌚⌚ **Wiztype (Sierra)** — The comic strip character Wizard of Id teaches you how to touch-type the fun way. He may also teach you some bad typing habits that may be hard to break and frustrate you with menus that don't allow you to escape. (9/17/84)

⌚⌚ **Wordmarc (Marc Software International)** — With several unique features, this word processor is relatively easy to learn. But it is only adequate, a bad microcomputer version of a mainframe product. Needs a new manual, some debugging, and improved efficiency. (7/23/84)

⌚⌚⌚ **Word Perfect (Satellite Software International)** — A full-featured, reliable, and fast powerhouse of a word processor that includes a macro facility, spelling checker, merge function, and incredibly good support. It has so many features that it may overwhelm beginners, but in general it has about all you could want in a word processor. (8/20/84)

## ON-LINE

☎☎☎ **CompuServe (CompuServe Information)** — CompuServe is a valuable information service that works. If providers continue to listen to user feedback, this has the potential to become the service for the microcomputing community. (4/23/84)

☎☎☎ **Dow Jones News/Retrieval (Dow Jones)** — An informative, entertaining on-line service that's well worth the money. Lets you pull fast-breaking stock market and business news off the wire. (4/30/84)

☎☎☎ **The Source (The Source)** — Provides good quality and a broad scope of services at rates competitive with similar information systems. It has good electronic mail. It is valuable to those whose machines get medium to heavy use; first-time users should be wary of the high initial charge and questionable support. (5/7/84)

☎☎☎ **Delphi (General Videotex)** — One of the best values in the on-line services market. Access to other services, great support, and the Delphi Oracle. Error handling is sometimes cryptic. (8/13/84)

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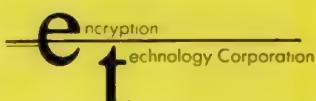
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*John C. Dvorak*

# MORROW'S COMDEX GIVEAWAY



**H**ave you noticed that the electronic news service called **NewsNet** is giving away \$50 worth of connect time with a certificate found in every modem box and dozens of communications packages? It has a **bunch** of newsletters and news services on-line.

What attracted my attention was how the company promotes state-of-the-art telecommunications and computer technology. Funny. If it believes in all these advances, why does it say you have to **notify it by U.S. mail** if you're **dissatisfied** with its service? The company misses the point about the whole scene; maybe I should subscribe to all those newsletters via U.S. mail, too.

This backwards notion is further emphasized by a **100 percent surcharge** on the 1,200-baud connect line. Are these guys trying to **discourage** technology? Sure sounds like it. Hey, if you want people to use your service, charge **less, not more**, for 1,200 baud, and you'll make some money — tons of money. If they want to charge on a per-line-received rate, that's all right — but to charge extra to use a faster line?

They should welcome and encourage 1,200-baud connections, not discourage them, unless they are large stockholders of AT&T. Do these guys like to have **their lines tied up at 300 baud** or what? I don't like The Source surcharge, either, although it's not a ridiculous 100 percent.

What irks me is that I know some guy from NewsNet will write the editor and complain that 1,200 baud at a 100 percent surcharge is still one-half the connect charges of the 300-baud line. This, of course, ignores the inevitable time-consuming slogging through menus, which consumes a lot of time, even at 1,200 baud. And who knows what kind of **mainframe delays** there may be?

All I know is that all that really counts is **central processing unit time** on the

big machine, and that shouldn't change at any baud rate if the software is any good.

End of tirade.

**Comdex tip.** As soon as you get to Comdex, rush over to the Morrow Inc. booth and pick up a copy of the little red book *Sayings of Chairman Morrow*. It promises to be the hit of the show and I'll bet you a dollar they run out of them within 48 hours.

The book (a freebie) contains some of the funniest observations and quotes made by Morrow in print. Here is a typical Morrowism:

*We're not selling toothpaste, or bubble gum, or soft drinks, in which there's no difference in the basic product from one year to another except packaging. We're*

***As soon as you  
get to Comdex,  
pick up a copy of  
the little red book.***

*selling technology, and there's a difference. Look at Detroit. In the early days, the auto industry was run by engineers and technical types. It was only later, to squeeze every last dollar out of profit, that they brought in the bean counters. And as soon as they did that, Japan came in, and there wasn't anything left.*

If you're in Las Vegas a day early, you might want to check out the **Software Publishing Association's** miniconference. I'll be moderating a session titled the "Future of Personal Computer Technology." There you'll get to hear the knowledgeable Art Kleiner of *Whole Earth Software* catalog fame; the reclusive workaholic Bill Bates, author of the *Computer Cookbook*; Robert Taller, marketing whiz of Keycom; and Thomas "Doc" Byers of Digital Research.

Byers is probably one of the most engaging speakers you'll ever hear — a master of innuendo. For information on the miniconference, call the Software Publishing Association at (202) 364-0523.

It's a bargain conference at \$75.

**Aside Dept.** Have you heard that Apple got a patent or copyright on its **pull-down, pop-up menu** concept? Now I hear that the company **plans to sue anyone** who uses the idea.

This action is obviously **targeted at IBM** and its copycat program, PCjr Paint. This program looks exactly like Mac Paint and the Bill Budge paint clone for the Apple II.

Now nobody really expects Apple to beat IBM in court. Heck, the U.S. government can't beat IBM in court. I think it just plans to **embarrass IBM**. Meanwhile, I have to assume the software for mice by Microsoft and Mouse Systems may be **under attack**. That would be too bad because both the Microsoft Mouse and the Mouse System mice are super products.

I now use a **Mouse Systems** mouse to boldface this column. The mouse comes with a Pascal-like compiler that allows you to create your own action menus that can act like complex command sequences. It takes about an hour to figure out the language if you program in Basic or assembly language. It takes about half that time if you program in Pascal or C.

Microsoft has a similar system. Anyway, **both are highly recommended** as inexpensive add-ons. I'll take a look at the modern Logitec mouse in the weeks to come.

Speaking of Logitec, you know that its **Modula II** is the definitive Modula II. This is the language that Pascal inventor Nicolas Wirth designed as the be-all, end-all Pascal-like structured superlanguage. It costs a hefty \$495, but I understand that users groups can get some sort of **special deal** that is too outrageous to print.

Call Sue Cooper at Logitec, (415) 365-9852 or write the company at 805 Veterans Blvd., Redwood City, CA 94063. She is the marketing director and, like all marketing types, she **loves** phone calls.

Sue is the wife of **programming legend** and gourmet Alan Cooper. Cooper, a former hippie turned dilettante, just finished a critical path program that will be released by Sorcim (probably at Comdex). It's an amazing program that I have been using for my personal projects. In the months ahead, I'll be comparing it to the slickly packaged Timeline from Breakthrough Software. □



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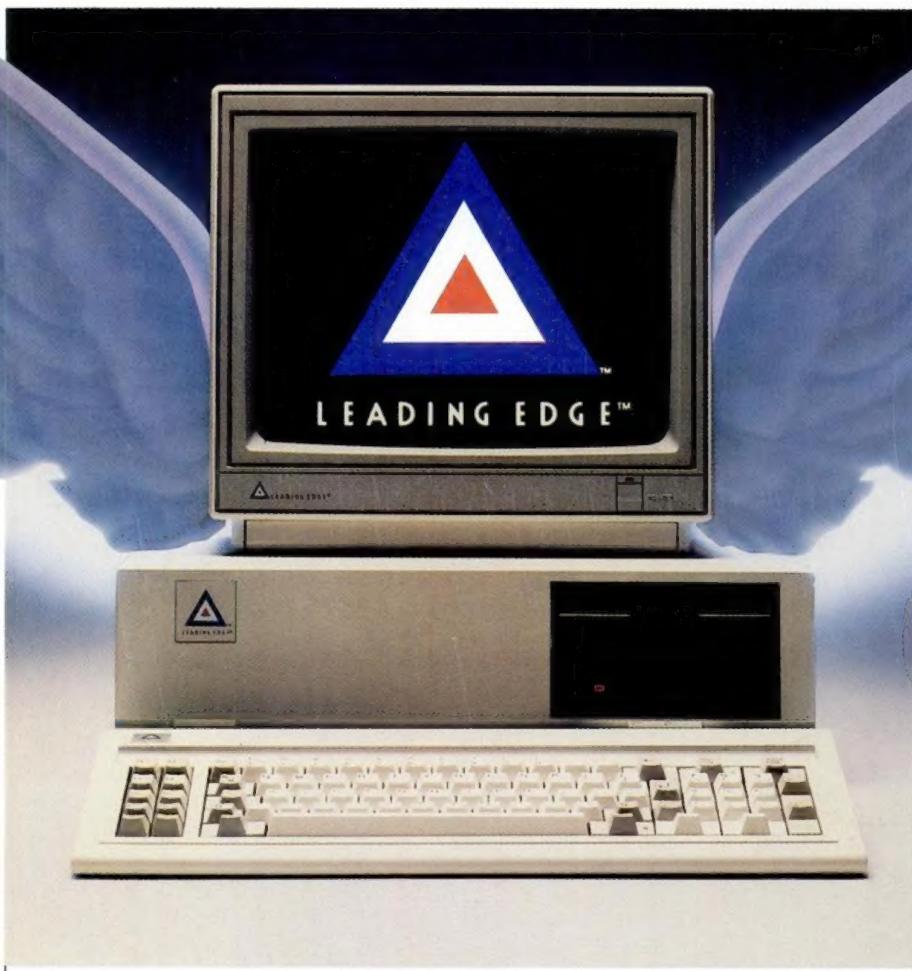
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There are some people who wouldn't buy a Rolls Royce for a buck-ninety-five if it didn't come with a hood ornament.

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